



# **The Commonwealth of Massachusetts**

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## **DEPARTMENT OF PUBLIC UTILITIES**

### **PIPELINE ENGINEERING AND SAFETY DIVISION**

## **INCIDENT REPORT**

627 Pleasant Street, Winthrop, Massachusetts  
February 23, 2012

PIPELINE ENGINEERING AND SAFETY DIVISION

627 Pleasant Street, Winthrop, Massachusetts

February 23, 2012

Boston Gas Company and Colonial Gas Company d/b/a National Grid

\*Estimated Property Damage: \$500,000

Injuries: None

Report Issued: May 23, 2014

\* Estimated by Boston Gas Company and Colonial Gas Company d/b/a National Grid



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**Exhibit 11:** Odorant Level Readings

**Exhibit 12:** Inside Leakage Survey and Atmospheric Corrosion Records; Main and  
Outside Services Leakage Surveys



## I. INTRODUCTION

### A. Scope of the Report

The Massachusetts Department of Public Utilities ("Department"), Pipeline Engineering and Safety Division ("Division"), pursuant to G.L. c. 164, § 105A and a Federal Certification Agreement as provided for in 49 U.S.C. § 60105, has investigated a natural gas ("gas") release at 627 Pleasant Street, Winthrop, on February 23, 2012 ("Incident").<sup>1</sup> Boston Gas Company and Colonial Gas Company, d/b/a National Grid ("Operator" or "Company") operates gas facilities in Winthrop, MA. The release of gas contributed to an explosion, fire, and over \$500,000.00 in property damage (Exh. 1). The Winthrop Fire Department reported that an ambulance transported one person to the hospital (Exh. 2).

As part of the Department's annual certification process by the United States Department of Transportation ("U.S. DOT"), the Department must report to the U.S. DOT

each accident or incident . . . involving a fatality, personal injury requiring hospitalization, or property damage or loss of more than an amount the Secretary establishes... and any other accident the [Department] considers

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<sup>1</sup> Incident means any of the following events:

- (1) An event that involves a release of gas from a pipeline, or of liquefied natural gas, liquefied petroleum gas, refrigerant gas, or gas from an LNG facility, and that results in one or more of the following consequences:
  - (i) A death, or personal injury necessitating in-patient hospitalization;
  - (ii) Estimated property damage of \$50,000 or more, including loss to the operator and others, or both, but excluding cost of gas lost;
  - (iii) Unintentional estimated gas loss of three million cubic feet or more;
- (2) An event that results in an emergency shutdown of an LNG facility. Activation of an emergency shutdown system for reasons other than an actual emergency does not constitute an incident.
- (3) An event that is significant in the judgment of the operator, even though it did not meet the criteria of paragraphs (1) or (2) of this definition.

significant, and a summary of the investigation by the [Department] of the cause and circumstances surrounding the accident or incident. 49 U.S.C. § 60105(c).

The purpose of this report is to inform the U.S. DOT as to the cause and circumstances surrounding the Incident. The Department has established procedures for determining the nature and extent of violations of codes and regulations pertaining to the safety of pipeline facilities and the transportation of gas, including but not limited to, 220 C.M.R. §§ 101.00 through 113.00. See 220 C.M.R. § 69.00 et seq. The Division also enforces the U.S. DOT safety standards for gas pipeline systems as set forth in 49 C.F.R. Part 192 ("Part 192") and 49 C.F.R. Part 199. G.L. c. 164, § 105A.

B. Incident Overview

On February 23, 2012, at 7:54 a.m., the Operator received a call from the resident at 627 Pleasant Street, Winthrop, reporting an odor of gas in the basement and through the house (Exh. 3). At 7:58 a.m., the Company received a call from the Winthrop Fire Department stating that there was a "disturbance" at this location (Exh. 3). The Operator technician arrived onsite at 8:23 a.m. (Exh. 3). At approximately 8:45 a.m. on February 23, 2012, the Company notified the Department of the Incident (Exh. 3).

The Department dispatched two investigators to the scene. At approximately 11:30 a.m., Division investigators arrived at the scene of the Incident. Representatives from the Company, Winthrop Fire Department, State Police, and the State Fire Marshal's Office were at the scene.



## II. THE DEPARTMENT'S INVESTIGATION

### A. Description of Site and Gas Facilities

Pleasant Street, Winthrop is located in a residential area comprised of single family homes (Exh. 4(a)). The structure at 627 Pleasant Street was a two-story wood frame house with a basement. The house was constructed in 1850. The Division investigator observed that the natural gas service line entered through the right front basement wall. The gas furnace, hot water heater and dryer were located in the basement (Exh. 4(b)). A gas stove was located on the first floor of the house (Exh. 4(c)).

A six (6) inch low pressure cast iron main, underlies Pleasant Street (Exh. 5). The cast iron main was installed in 1947 and 1948 (Exh. 5). The Division investigators measured the main to be at a depth of three (3) feet, six (6) inches. In 1986, the Operator inserted a one inch plastic gas service into the existing steel gas service to 627 Pleasant Street (Exh. 6). The Division investigator observed that the steel pipe that encased the plastic pipe extended from the house to the curb line. The service line had a service valve located in the street (Exh. 6). The Division investigator measured it to be at a depth of four (4) feet, six (6) inches. The Company reported that the operating pressure of the gas main and service line at the time of the Incident was approximately 0.35 pounds per square inch gauge (Exh. 1).

### B. Description of the Scene

The building had been severely damaged by an apparent explosion and subsequent fire (Exhs. 4(d), 4(e)). Debris was blown onto the lawn of 627 Pleasant Street, and adjacent properties (Exh. 4(e)). In addition, the windows and walls were displaced.

In the basement, the inspectors observed: (1) the gas service entrance and meter on the inside right front foundation wall; (2) a water heater and furnace located in close proximity to the service entrance; (3) a washer and dryer in the back of the basement; and (4) a sewer trap and sump pump in the basement floor near the center of the inside front foundation wall of the house. On the first floor, the inspectors observed a gas stove in the kitchen area (Exh. 4(c)).

C. Post-Incident Leak Investigation

1. Leak Survey

After the incident, the Company conducted a leak survey of the surrounding area (Exhs. 7(a), 7(b)). The Company reported the following gas readings:

- Fifty five (55%) percent gas reading in the sidewalk area over the service line, which bled down to twenty (20%) percent gas reading;
- Twenty (20%) percent gas reading over the cast iron main in the street;
- A half (0.5%) percent gas reading in the sewer manhole adjacent to the service line to 627 Pleasant Street; and
- One (1%) percent gas reading in the sewer trap located in the basement of 630 Pleasant Street.

The Operator also conducted a leak investigation of Nos. 62 and 72 Main Street; 623, 626, 631, 632, and 640 Pleasant Street, and reported no gas readings (Exhs. 7(a), 7(b)).

2. Leaks on Plastic Service Line to 627 Pleasant Street, Winthrop

The Operator excavated at the gas main, and found a leak at the one (1) inch plastic service line transition fitting downstream of a saddle fitting attached to the six (6) inch cast iron main (Exh. 8(a)). The Division inspectors observed that soil in the area of the leak was a



dense clay material. The Operator removed, and the Department secured, the service saddle, transition fitting, and approximately one foot of pipe that included the leak location (Exh. 8(b)).

The Operator excavated in the front lawn of 627 Pleasant Street, and uncovered the plastic service line inside a steel sleeve. The line extended from inside the house foundation wall to the area in the sidewalk where the Operator detected a fifty five (55%) percent gas reading (Exhs. 7(a), 7(c)). When the Operator exposed the gas service inside the house they found a half (1/2) inch hole in the plastic pipe at the transition point of the internal stiffener located inside the foundation wall (Exhs. 8(c), 8(d), 8(e)).

3. Leaks on Customer Piping Inside 627 Pleasant Street, Winthrop

The Operator concluded that the most probable source of the release of gas was on a faulty valve on the customer owned piping, and not from the migration of gas outside of the building (Exhs. 1, 9). After the Incident, the Operator's insurance investigator reported a gas valve located in the basement on the customer side of the gas meter was found to be leaking, as indicated by bubbles from a soap test (Exh. 9). The Company did not include documentation on: (1) the test pressure; (2) test duration; (3) pressure drop on the customer piping; or (4) who performed the test (Exh. 9).

4. Other Underground Utilities

The Division inspector ascertained that an eight (8) inch cast iron water main and a fifteen (15) inch sewer main underlie Pleasant Street. The sewer manhole in front of 627 Pleasant Street, has a twenty four (24) inch diameter manhole cover (Exh. 7(d)). A portion of the manhole is brick, with concrete flooring (Exh. 7(e)). The Division inspector determined



that the sewer manhole has the following dimensions: one (1) foot, seven (7) inches from the top of the manhole to the bottom of the bricked area; and fifteen (15) feet, ten (10) inches from the top of the manhole to the bottom of the manhole. The bottom of the manhole contained running water. This sewer manhole is located five (5) feet, four (4) inches from the six (6) inch cast iron gas main on Pleasant Street (Exh. 7(d)).

The Division inspector observed the Operator conduct an internal inspection of the sewer line, from the sump pump area inside of 627 Pleasant Street, to the main sewer line located in the street. The sump pump was located at the center of the inside front foundation wall of the house in a covered box in the basement floor; the box also contained the water line (Exhs. 4(f), 4(g)). During the inspection, the Division inspector noted the following:

1. The clay sewer drain line had been repaired with plastic (PVC) sometime prior to the incident.
2. The plastic portion of the sewer drain was a repair thirty eight (38) feet from the foundation wall, there the plastic sewer drain line continued another fifty (50) feet to the end of the pipe.
3. A leak in the drain line was detected twenty five (25) feet from the foundation wall, and water was pouring into the sewer pipe.
4. The chimney on the end of the sewer pipe is fifty (50) feet from the foundation wall and it takes a ninety degree bend downward. The length of that section of pipe from the bend to the main line sewer is seven (7) feet.
5. A tree root was visible inside the drain pipe, nine (9) feet from the foundation wall.

D. Pre-Incident Activities

1. Maintenance

Maintenance records provided by the Company for the six (6) inch cast iron gas main, and one (1) inch plastic service indicate that the Operator performed no maintenance work on the service to 627 Pleasant Street since its installation in 1986 (Exh. 6). In addition, the Operator had no record of any maintenance work performed on the cast iron main or customer owned piping between January 1, 2002, and February 22, 2012, (Exh. 5).

2. Dig Safe Notifications

The Operator did not report any Dig Safe notification reports for excavation activity in the vicinity of 627 Pleasant Street, Winthrop (Exh. 5).

3. Operator Qualification

The Company technicians that arrived onsite after the incident to perform leak investigation are all qualified in the following tasks: NGA-020 Investigating Leak/Odor Complaints, and NGA-070 Abnormal Conditions (Exh. 10).

4. Odorization

There were reports of an odor of gas prior to the Incident (Exh. 3). The state regulation, 220 C.M.R. § 101.06(20), requires operators to odorize gas in their distribution systems. Gas must be "readily perceptible to the normal or average olfactory senses of a person coming from fresh uncontaminated air into a closed room containing [0.15 percent gas in air]." 220 C.M.R. § 101.06(20)(a). Operators are also required to conduct periodic sampling of odorant concentrations throughout their system. 220 C.M.R. § 101.06(20)(f). The Operator conducts odorant sampling on a monthly basis.

The Operator conducted odorant level tests prior to and after the incident. On February 23, 2012, qualified National Grid employees conducted an odor level test in Winthrop

(Exh. 11). The results of the tests on February 23, 2012 are as follows:

1. Pleasant@ Pauline Regulator Station, Winthrop @ 10 a.m. - Odor level range: 0.11 - 0.12 percent gas in air.
2. 623 Pleasant Street, Winthrop @ 10:40 a.m. - Odor level range: 0.10 - 0.12 (Exh. 11)

The odor detectability level of gas in air is within the prescribed state regulation. See 220 C.M.R. § 101.06(20)(a).

5. Leak Surveys Prior to the Incident

Leakage surveys of gas main and services are required by federal and state regulations. See 49 C.F.R. § 192.723(a) and 220 C.M.R. § 101.06(21). Consistent with Federal and State regulations, the Operator's Operating and Maintenance procedures requires services, outside business districts, to be inspected for atmospheric corrosion and leak surveyed every three years (SSUR-5040 Inside Service Leak Survey and Atmospheric Corrosion Inspection). The Operator conducted an atmospheric corrosion inspection and leakage survey on March 17, 2011. The Company reported no leaks or visible atmospheric corrosion. (Exh. 12).

The Department reviewed the leak history of the six (6) inch cast iron main on Pleasant Street. On August 1, 2011, the Operator performed a walking survey of the main and service (Exh. 12). On February 1, 2011, the Operator conducted a winter patrol survey of the six (6) inch cast iron main (Exh. 12). The Company conducted a mobile survey of the main on September 15, 2010 (Exh. 12). The Operator detected no leaks. Previously, the Operator



conducted surveys of the main and services on Pleasant Street, every year from 2002 thru 2011. There were no leaks detected.

### III. FAILURE ANALYSIS OF PIPE SAMPLE

Massachusetts Materials Research, Inc. ("MMR") conducted a failure analysis of the Pleasant Street pipe samples. The purpose of the testing was to determine the probable cause of the failure of the Operator's gas facilities. MMR's analysis included visual inspection, leak/flow test, fracture analysis, mechanical testing, and radiographic inspection that includes two distinct facilities: the transition fitting connected to the saddle fitting that was mounted to the main in front of 627 Pleasant Street (Exh. 8(b)), Winthrop; and the plastic pipe in the transition fitting at the foundation wall to 627 Pleasant Street (Exhs. 8(c), 8(d), 8(e)).<sup>2</sup>

With respect to the saddle transition fitting mounted on the gas main. MMR noted that[t]he saddle fitting stiffener was askew in the joint (Exh. 8(f)). MMR concluded that:

Putting enough bending force on a plastic service line to angle a stiffener in a transition fitting creates a severe situation for the plastic component. This is a condition created at assembly of this transition fitting during the 1986 steel service replacement (MMR Project No. 92941, at 4).

A crack was present in the plastic service pipe at the edge of the saddle transition fitting stiffener. The saddle fitting stiffener was askew in its joint and the pipe was angled exiting the transition fitting. The crack was caused by the bending and other forces on the plastic pipe combined with internal impingement on the end of the stiffener. This arrangement appears to have been the result of installation. The measured leak rate in the laboratory was 17.5 ml/min. This leak rate may be lower than the in-service rate as cutting the plastic pipe to remove the saddle would relax service stresses and could have closed up the breach a bit (MMR Project No. 92941, at 7).

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<sup>2</sup> Copies of the MMR Report can be obtained by contacting: Massachusetts Materials Research Inc., P.O. Box 810, 1500 Century Drive, West Boylston, MA 01583.

Applying enough force on a plastic pipe to skew the transition fitting internals and then installing the pipe to leave that force intact places undue loading on plastic piping in general. When the resulting configuration causes that plastic pipe to press against the edge of a metal component, a crack like that present in the incident pipe is the logical outcome (MMR Project No. 92941, at 7) (Exhs. 8(g), 8(h), 8(i)).

MMR's comments on its analysis of the transition fitting in the foundation wall to 627 Pleasant Street are as follows:

The service line hole possessed the thinning and general morphology of a blow-out type hole. This is consistent with heat exposure and is a result of the incident. The service line within the transition fitting also exhibited obvious heat damage. The service line 180-degrees to the blow hole was unremarkable, (MMR Project No. 92941 - Page 3 See Exh. 8(d)).

#### IV. FINDINGS AND CONCLUSIONS

##### A. Findings

1. The house at 627 Pleasant Street is located in a residential district in Winthrop.
2. At 7:54 a.m. the Operator received a call from the resident at 627 Pleasant Street, Winthrop, reporting an odor of gas in the basement and through the house.
3. At 7:58 a.m. on February 23, 2012, the Operator received a call from the Winthrop Fire Department stating that there was a "disturbance" at 627 Pleasant Street, Winthrop.
4. The Operator's technician arrived onsite at 8:23 a.m.
5. The natural gas service line entered through the right side of the front basement wall.
6. There is a sump pump in the basement floor, near the center of the inside front foundation wall of 627 Pleasant Street.
7. The Operator installed a six (6) inch cast iron gas main under Pleasant Street in 1947 and 1948.



8. There is an eight (8) inch cast iron water main on Pleasant Street.
9. There is a fifteen (15) inch sewer main on Pleasant Street.
10. The sewer manhole is located five (5) feet, four (4) inches from the six (6) inch cast iron gas main on Pleasant Street.
11. The six (6) inch cast iron gas main and gas service line to 627 Pleasant Street were operating at 0.35 pounds per square inch gauge.
12. In 1986, the Operator inserted a one inch plastic gas service line into a steel pipe to service 627 Pleasant Street.
13. The plastic gas service line was connected to the six (6) inch cast iron gas main underlying Pleasant Street through a saddle transition fitting.
14. The odorant levels reported by the Operator are consistent with state regulations.
15. Following the Incident, the Operator reported:
  - Fifty five (55%) percent gas reading in the sidewalk area over the service line, which bled down to twenty (20%) percent gas reading;
  - Twenty (20%) percent gas reading over the cast iron main in the street;
  - A half (0.5%) percent gas reading in the sewer manhole adjacent to the service line to 627 Pleasant Street; and
  - One (1%) percent gas reading in the sewer trap located in the basement of 630 Pleasant Street.
16. The Operator detected two leaks on the gas service line: one downstream of a saddle transition fitting attached to the main underlying Pleasant Street, and another at a transition fitting in the foundation wall at 627 Pleasant Street.
17. The MMR conclusions, that the saddle transition fitting stiffener near the gas main was askew in its joint, and that the plastic service line was angled exiting the transition fitting are reasonable, and supported by substantial evidence.
18. The MMR conclusion that, the plastic service pipe cracked at the edge of the saddle transition fitting attached to the main is reasonable, and supported by substantial evidence.
19. The MMR conclusion that, the cause of the crack was bending and other forces on the plastic pipe, combined with the internal impingement on the end of the

- stiffener on the saddle transition fitting, is reasonable, and supported by substantial evidence.
20. The MMR conclusion that, when the gas service line transition fitting assembly was leak tested and that "the leak rate may be lower than the in-service rate as cutting the plastic pipe to remove the saddle would relax service stresses and could have closed up the breach a bit," is reasonable and supported by substantial evidence.
  21. The MMR conclusion that the leak in the service line at the transition fitting in the foundation wall of 627 Pleasant Street is consistent with heat exposure, and a result of the Incident, is reasonable and supported by substantial evidence.
  22. The Operator did not provide substantial and specific evidence to support a finding that the most probable source of the release of gas was on a faulty valve on the customer's owned piping.

B. Conclusions

The explosion at 627 Pleasant Street was caused by the accumulation and ignition of natural gas. The facts that, after the Incident, the Operator detected gas in the area of (1) the cast iron gas main in the street; (2) the sewer manhole adjacent to the gas service line supplying 627 Pleasant Street; (3) at the sewer trap in the basement floor of 630 Pleasant Street (across the street from 627 Pleasant Street); and (4) the Operator received a call from the resident at 627 Pleasant Street, Winthrop, reporting an odor of gas in the basement and through the house gives the Department reason to conclude that natural gas may have migrated from the gas leak at the saddle transition fitting near the gas main under Pleasant Street, and into the basement of 627 Pleasant Street through the sump pump area located in the floor of the basement. Gas accumulated inside the house to an explosive level and several possible sources of ignition were present within the house.

V. OPERATOR POST-INCIDENT ACTIONS

On March 26, 2014, the Department concluded an enforcement action with the Operator. National Grid, D.P.U. 12-PL-16. The Division concluded that the plastic service line may not have been installed so as to minimize anticipated piping strain and external loading. This was inconsistent with the Operator's Operating Manual and federal regulations.

The Respondent did not follow its Leak Investigation procedures, did not perform a complete leak investigation and may not have eliminated a potential hazard to persons or property.

The response at the National Grid Call Center ("Call Center") when it received the gas odor report was not effective, the Respondent's training of its Call Center employee may not have been effective, National Grid employees may not have effectively followed the Respondent's emergency procedures.



## **EXHIBIT 1**

**U.S. Department of Transportation Incident Report**

NOTICE: This report is required by 49 CFR Part 191. Failure to report can result in a civil penalty not to exceed 100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed \$1,000,000 as provided in 49 USC 60122.

OMB NO: 2137-0522  
EXPIRATION DATE: 02/28/2014



U.S. Department of Transportation  
Pipeline and Hazardous Materials Safety Administration

Original Report  
Date:  
No.

09/08/2013

20130099- 15722

(DOT Use Only)

### INCIDENT REPORT - GAS DISTRIBUTION SYSTEM

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0522. Public reporting for this collection of information is estimated to be approximately 10 hours per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

#### INSTRUCTIONS

**Important:** Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at <http://www.phmsa.dot.gov/pipeline>.

#### PART A - KEY REPORT INFORMATION

Report Type: (select all that apply)	Original: Yes	Supplemental:	Final: Yes
Last Revision Date			
1. Operator's OPS-issued Operator Identification Number (OPID):	1640		
2. Name of Operator	BOSTON GAS CO		
3. Address of Operator:			
3a. Street Address	40 SYLVAN ROAD		
3b. City	WALTHAM		
3c. State	Massachusetts		
3d. Zip Code	02451		
4. Local time (24-hr clock) and date of the Incident:	02/23/2012 07:58		
5. Location of Incident:			
5a. Street Address or location description	627 Pleasant St		
5b. City	Winthrop		
5c. County or Parish	Suffolk		
5d. State:	Massachusetts		
5e. Zip Code:	02152		
5f. Latitude:	42.3832652		
Longitude:	-70.9914725		
6. National Response Center Report Number:	1003862		
7. Local time (24-hr clock) and date of initial telephonic report to the National Response Center:	02/24/2012 12:40		
8. Incident resulted from:	Unintentional release of gas		
9. Gas released:	Natural Gas		
- Other Gas Released Name:			
10. Estimated volume of gas released - Thousand Cubic Feet (MCF):	60.00		
11. Were there fatalities?	No		
- If Yes, specify the number in each category:			
11a. Operator employees			
11b. Contractor employees working for the Operator			
11c. Non-Operator emergency responders			
11d. Workers working on the right-of-way, but NOT associated with this Operator			
11e. General public			
11f. Total fatalities (sum of above)			
12. Were there injuries requiring inpatient hospitalization?	No		
- If Yes, specify the number in each category:			
12a. Operator employees			
12b. Contractor employees working for the Operator			
12c. Non-Operator emergency responders			
12d. Workers working on the right-of-way, but NOT associated with this Operator			
12e. General public			
12f. Total injuries (sum of above)			
13. Was the pipeline/facility shut down due to the incident?	No		
- If No, Explain:	Company secured gate box at this location.		



- If Yes, complete Questions 13a and 13b: (use local time, 24-hr clock)	
13a. Local time and date of shutdown:	
13b. Local time pipeline/facility restarted:	
- Still shut down? (* Supplemental Report Required)	
14. Did the gas ignite?	Yes
15. Did the gas explode?	Yes
16. Number of general public evacuated:	3
17. Time sequence (use local time, 24-hour clock):	
17a. Local time operator identified Incident:	02/23/2012 07:58
17b. Local time operator resources arrived on site:	02/23/2012 08:23
<b>PART B - ADDITIONAL LOCATION INFORMATION</b>	
1. Was the Incident on Federal land?	No
2. Location of Incident	Private property
3. Area of Incident:	Aboveground
	Specify: Inside a building
	If Other, Describe:
	Depth of Cover:
4. Did Incident occur in a crossing?	No
- If Yes, specify type below:	
- If Bridge crossing -	
Cased/ Uncased:	
- If Railroad crossing -	
Cased/ Uncased/ Bored/drilled	
- If Road crossing -	
Cased/ Uncased/ Bored/drilled	
- If Water crossing -	
Cased/ Uncased	
Name of body of water (If commonly known):	
Approx. water depth (ft):	
<b>PART C - ADDITIONAL FACILITY INFORMATION</b>	
1. Indicate the type of pipeline system:	Natural Gas Distribution, privately owned
	- If Other, specify:
2. Part of system involved in Incident:	Other
	- If Other, specify:
2a. Year "Part of system involved in Incident" was installed:	Customer owned piping
	Unknown?
3. When "Main" or "Service" is selected as the "Part of system involved in Incident" (from PART C, Question 2), provide the following:	Yes
3a. Nominal diameter of pipe (in):	
3b. Pipe specification (e.g., API 5L, ASTM D2513):	
	Unknown?
3c. Pipe manufacturer:	
	Unknown?
3d. Year of manufacture:	
	Unknown?
4. Material involved in Incident:	Steel
	- If Other, specify:
4a. If Steel, Specify seam type:	
	None/Unknown?
4b. If Steel, Specify wall thickness (inches):	Unknown
	Unknown?
4c. If Plastic, Specify type:	Yes
	- If Other, describe:
4d. If Plastic, Specify Standard Dimension Ratio (SDR):	
	Or wall thickness:
	Unknown?
4e. If Polyethylene (PE) is selected as the type of plastic in Part C, Question 4.c:	
- Specify PE Pipe Material Designation Code (i.e. 2406, 3408, etc.)	
	Unknown?
5. Type of release involved :	Leak
- If Mechanical Puncture - Specify Approx size:	
	Approx. size: in. (axial):
	in. (circumferential):
- If Leak - Select Type:	Other
	- If Other, Describe: Leak on customer owned piping



- If Rupture - Select Orientation:	
- If Other, Describe:	
Approx. size: (widest opening):	
(length circumferentially or axially):	
- If Other - Describe:	
<b>PART D - ADDITIONAL CONSEQUENCE INFORMATION</b>	
1. Class Location of Incident :	Class 3 Location
2. Estimated Property Damage :	
2a. Estimated cost of public and non-Operator private property damage	\$ 500,000
2b. Estimated cost of Operator's property damage & repairs	\$ 0
2c. Estimated cost of Operator's emergency response	\$ 0
2d. Estimated other costs	\$ 0
- Describe:	
2e. Total estimated property damage (sum of above)	\$ 500,000
<b>Cost of Gas Released</b>	
2f. Estimated cost of gas released	\$ 500
3. Estimated number of customers out of service:	
3a. Commercial entities	0
3b. Industrial entities	0
3c. Residences	1
<b>PART E - ADDITIONAL OPERATING INFORMATION</b>	
1. Estimated pressure at the point and time of the Incident (psig):	.35
2. Normal operating pressure at the point and time of the Incident (psig):	.34
3. Maximum Allowable Operating Pressure (MAOP) at the point and time of the Incident (psig):	.50
4. Describe the pressure on the system relating to the Incident:	Pressure did not exceed MAOP
5. Was a Supervisory Control and Data Acquisition (SCADA) based system in place on the pipeline or facility involved in the Incident?	Yes
- If Yes:	
5a. Was it operating at the time of the Incident?	Yes
5b. Was it fully functional at the time of the Incident?	Yes
5c. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume or pack calculations) assist with the detection of the Incident?	No
5d. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Incident?	No
6. How was the Incident initially identified for the Operator?	Notification from Emergency Responder
6a. If "Controller", "Local Operating Personnel, including contractors", "Air Patrol", or "Ground Patrol by Operator or its contractor" is selected in Question 6, specify the following:	
- If Other, Specify:	
7. Was an investigation initiated into whether or not the controller(s) or control room issues were the cause of or a contributing factor to the Incident?	No, the Operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: (provide an explanation for why the Operator did not investigate)
- If No, the operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: (provide an explanation for why the operator did not investigate)	Incident was on customer owned piping and the SCADA system did not provide any information to the Controllers that an incident occurred, thus they could not take any action as a result of the incident. Emergency Responders alerted the Company.
- If Yes, Specify investigation result(s) (select all that apply):	
- Investigation reviewed work schedule rotations, continuous hours of service (while working for the Operator), and other factors associated with fatigue	
- Investigation did NOT review work schedule rotations, continuous hours of service (while working for the Operator), and other factors associated with fatigue	
- Provide an explanation for why not:	
- Investigation identified no control room issues	
- Investigation identified no controller issues	
- Investigation identified incorrect controller action or controller error	
- Investigation identified that fatigue may have affected the controller(s) involved or impacted the involved controller(s) response	



- Investigation identified incorrect procedures	
- Investigation identified incorrect control room equipment operation	
- Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response	
- Investigation identified areas other than those above	
Describe:	
<b>PART F - DRUG &amp; ALCOHOL TESTING INFORMATION</b>	
1. As a result of this Incident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?	No
- If Yes:	
1a. Specify how many were tested:	
1b. Specify how many failed:	
2. As a result of this Incident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?	No
- If Yes:	
2a. Specify how many were tested:	
2b. Specify how many failed:	
<b>PART G - CAUSE INFORMATION</b>	
Select only one box from PART G in shaded column on left representing the Apparent Cause of the Incident, and answer the questions on the right. Describe secondary, contributing, or root causes of the Incident in the narrative (PART H).	
Apparent Cause:	G8 - Other Incident Cause
<b>G1 - Corrosion Failure</b> — only one sub-cause can be picked from shaded left-hand column	
Corrosion Failure Sub-Cause:	
- If External Corrosion:	
1. Results of visual examination:	
- If Other, Specify:	
2. Type of corrosion:	
- Galvanic	
- Atmospheric	
- Stray Current	
- Microbiological	
- Selective Seam	
- Other	
- If Other, Describe:	
3. The type(s) of corrosion selected in Question 2 is based on the following:	
- Field examination	
- Determined by metallurgical analysis	
- Other	
- If Other, Describe:	
4. Was the failed item buried under the ground?	
- If Yes:	
4a. Was failed item considered to be under cathodic protection at the time of the incident?	
- If Yes, Year protection started:	
4b. Was shielding, tenting, or disbonding of coating evident at the point of the incident?	
4c. Has one or more Cathodic Protection Survey been conducted at the point of the incident?	
If "Yes, CP Annual Survey" — Most recent year conducted:	
If "Yes, Close Interval Survey" — Most recent year conducted:	
If "Yes, Other CP Survey" — Most recent year conducted:	
- If No:	
4d. Was the failed item externally coated or painted?	
5. Was there observable damage to the coating or paint in the vicinity of the corrosion?	
6. Pipeline coating type, if steel pipe is involved:	
- If Other, Describe:	
- If Internal Corrosion:	
7. Results of visual examination:	
- If Other, Describe:	



8. Cause of corrosion (select all that apply):	
- Corrosive Commodity	
- Water drop-out/Acid	
- Microbiological	
- Erosion	
- Other	
- If Other, Specify:	
9. The cause(s) of corrosion selected in Question 8 is based on the following: (select all that apply):	
- Field examination	
- Determined by metallurgical analysis	
- Other	
- If Other, Describe:	
10. Location of corrosion (select all that apply):	
- Low point in pipe	
- Elbow	
- Drop-out	
- Other	
- If Other, Describe:	
11. Was the gas/fluid treated with corrosion inhibitor or biocides?	
12. Were any liquids found in the distribution system where the Incident occurred?	
Complete the following if any Corrosion Failure sub-cause is selected AND the "Part of system involved in incident" (from PART C, Question 2) is Main, Service, or Service Riser.	
13. Date of the most recent Leak Survey conducted	
14. Has one or more pressure test been conducted since original construction at the point of the Incident?	
- If Yes:	
Most recent year tested:	
Test pressure:	
<b>G2 – Natural Force Damage</b> – only one sub-cause can be picked from shaded left-handed column	
Natural Force Damage – Sub-Cause:	
- If Earth Movement, NOT due to Heavy Rains/Floods:	
1. Specify:	
- If Other, Specify:	
- If Heavy Rains/Floods:	
2. Specify:	
- If Other, Specify:	
- If Lightning:	
3. Specify:	
- If Temperature:	
4. Specify:	
- If Other, Specify:	
- If High Winds:	
- Other Natural Force Damage:	
5. Describe:	
Complete the following if any Natural Force Damage sub-cause is selected.	
6. Were the natural forces causing the Incident generated in conjunction with an extreme weather event?	
6.a If Yes, specify (select all that apply):	
- Hurricane	
- Tropical Storm	
- Tornado	
- Other	
- If Other, Specify:	
<b>G3 – Excavation Damage</b> – only one sub-cause can be picked from shaded left-hand column	
Excavation Damage – Sub-Cause:	
- If Excavation Damage by Operator (First Party):	
- If Excavation Damage by Operator's Contractor (Second Party):	
- If Excavation Damage by Third Party:	



<b>- If Previous Damage due to Excavation Activity:</b>	
<b>Complete the following ONLY IF the "Part of system involved in Incident" (from Part C, Question 2) is Main, Service, or Service Riser.</b>	
1. Date of the most recent Leak Survey conducted	
2. Has one or more pressure test been conducted since original construction at the point of the incident?	
- If Yes:	
Most recent year tested:	
Test pressure:	
<b>Complete the following if Excavation Damage by Third Party is selected.</b>	
3. Did the operator get prior notification of the excavation activity?	
3a. If Yes, Notification received from: (select all that apply):	
- One-Call System	
- Excavator	
- Contractor	
- Landowner	
<b>Complete the following mandatory CGA-DIRT Program questions if any Excavation Damage sub-cause is selected.</b>	
4. Do you want PHMSA to upload the following information to CGA-DIRT ( <a href="http://www.cga-dirt.com">www.cga-dirt.com</a> )?	
5. Right-of-Way where event occurred (select all that apply):	
- Public	
- Private	
- Pipeline Property/Easement	
- Power/Transmission Line	
- Railroad	
- Dedicated Public Utility Easement	
- Federal Land	
- Data not collected	
- Unknown/Other	
6. Type of excavator :	
7. Type of excavation equipment :	
8. Type of work performed :	
9. Was the One-Call Center notified?	
9a. If Yes, specify ticket number:	
9b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified:	
10. Type of Locator:	
11. Were facility locate marks visible in the area of excavation?	
12. Were facilities marked correctly?	
13. Did the damage cause an interruption in service?	
13a. If Yes, specify duration of the interruption:	
14. Description of the CGA-DIRT Root Cause (select only the one predominant first level CGA-DIRT Root Cause and then, where available as a choice, the one predominant second level CGA-DIRT Root Cause as well):	
- Root Cause Description:	
- If One-Call Notification Practices Not Sufficient, specify:	
- If Locating Practices Not Sufficient, specify:	
- If Excavation Practices Not Sufficient, specify:	
- If Other/None of the Above (explain), specify:	
<b>G4 - Other Outside Force Damage - only one sub-cause can be selected from the shaded left-hand column</b>	
<b>Other Outside Force Damage – Sub-Cause:</b>	
<b>- If Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Incident:</b>	
<b>- If Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation:</b>	
1. Vehicle/Equipment operated by:	
<b>- If Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring:</b>	
2. Select one or more of the following IF an extreme weather event was a factor:	
- Hurricane	
- Tropical Storm	



- Tornado	
- Heavy Rains/Flood	
- Other	
- If Other, Specify:	
<b>- If Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation:</b>	
<b>- If Electrical Arcing from Other Equipment or Facility:</b>	
<b>- If Previous Mechanical Damage NOT Related to Excavation:</b>	
<i>Complete the following ONLY IF the "Part of system involved in Incident" (from Part C, Question 2) is Main, Service, or Service Riser.</i>	
3. Date of the most recent Leak Survey conducted:	
4. Has one or more pressure test been conducted since original construction at the point of the Incident?	
- If Yes:	
Most recent year tested:	
Test pressure (psig):	
<b>- If Intentional Damage:</b>	
5. Specify:	
- If Other, Specify:	
<b>- If Other Outside Force Damage:</b>	
6. Describe:	
<b>G5 - Pipe, Weld, or Joint Failure</b> - only one sub-cause can be selected from the shaded left-hand column	
<b>Pipe, Weld or Joint Failure – Sub-Cause:</b>	
<b>- If Body of Pipe:</b>	
1. Specify:	
- If Other, Describe:	
<b>- If Butt Weld:</b>	
2. Specify:	
- If Other, Describe:	
<b>- If Fillet Weld:</b>	
3. Specify:	
- If Other, Describe:	
<b>- If Pipe Seam:</b>	
4. Specify:	
- If Other, Describe:	
<b>- If Threaded Metallic Pipe:</b>	
<b>- If Mechanical Fitting:</b>	
5. Specify the mechanical fitting involved:	
- If Other, Describe:	
6. Specify the type of mechanical fitting:	
- If Other, Describe:	
7. Manufacturer:	
8. Year manufactured:	
9. Year installed:	
10. Other attributes:	
11. Specify the two materials being joined:	
11a. First material being joined:	
- Steel	
- Cast/Wrought Iron	
- Ductile Iron	
- Copper	
- Plastic	
- Unknown	
- Other	
- If Other, Specify:	
11b. If Plastic, specify:	
- If Other Plastic, specify:	
11c. Second material being joined:	
- Steel	
- Cast/Wrought Iron	
- Ductile Iron	



- Copper	
- Plastic	
- Unknown	
- Other	
11d. If Plastic, specify:	- If Other, Specify:
12. If used on plastic pipe, did the fitting – as designed by the manufacturer – include restraint?	- If Other Plastic, Specify:
12a. If Yes, specify:	
<b>- If Compression Fitting:</b>	
13. Fitting type:	
14. Manufacturer:	
15. Year manufactured:	
16. Year installed:	
17. Other attributes:	
18. Specify the two materials being joined:	
18a. First material being joined:	
- Steel	
- Cast/Wrought Iron	
- Ductile Iron	
- Copper	
- Plastic	
- Unknown	
- Other	
18b. If Plastic, specify:	- If Other, specify:
18c. Second material being joined: -	- If Other Plastic, specify:
- Steel	
- Cast/Wrought Iron	
- Ductile Iron	
- Copper	
- Plastic	
- Unknown	
- Other	
18d. If Plastic, specify:	If Other, specify:
	- Other Plastic, specify:
<b>- If Fusion Joint:</b>	
19. Specify:	
	- If Other, Specify:
20. Year installed:	
21. Other attributes:	
22. Specify the two materials being joined:	
22a. First material being joined:	
	- If Other, Specify:
22b. Second material being joined:	
	- If Other, Specify:
<b>- If Other Pipe, Weld, or Joint Failure:</b>	
23. Describe:	
<b>Complete the following if any Pipe, Weld, or Joint Failure sub-cause is selected.</b>	
24. Additional Factors (select all that apply):	
- Dent	
- Gouge	
- Pipe Bend	
- Arc Burn	
- Crack	
- Lack of Fusion	
- Lamination	
- Buckle	
- Wrinkle	
- Misalignment	
- Burnt Steel	
- Other	
25. Was the Incident a result of:	
- Construction defect	

- Material defect	Specify:	
	Specify:	
- Design defect	- If Other, Specify:	
- Previous damage		
26. Has one or more pressure test been conducted since original construction at the point of the Incident?		
- If Yes:		
	Most recent year tested:	
	Test pressure:	
<b>G6 - Equipment Failure</b> - only one sub-cause can be selected from the shaded left-hand column		
<b>Equipment Failure - Sub-Cause:</b>		
<b>- If Malfunction of Control/Relief Equipment:</b>		
1. Specify:		
- Control Valve		
- Instrumentation		
- SCADA		
- Communications		
- Block Valve		
- Check Valve		
- Relief Valve		
- Power Failure		
- Stopple/Control Fitting		
- Pressure Regulator		
- Other		
	- If Other, Specify:	
<b>- If Threaded Connection Failure:</b>		
2. Specify:		
	- If Other, Specify:	
<b>- If Non-threaded Connection Failure:</b>		
3. Specify:		
	- If Other, Specify:	
<b>- If Valve:</b>		
4. Specify:		
	- If Other, Specify:	
4a. Valve type:		
4b. Manufactured by:		
4c. Year manufactured:		
<b>- If Other Equipment Failure:</b>		
5. Describe:		
<b>G7 - Incorrect Operation</b> - only one sub-cause can be selected from the shaded left-hand column		
<b>Incorrect Operation Sub-Cause:</b>		
<b>- If Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage:</b>		
<b>- If Valve Left or Placed in Wrong Position, but NOT Resulting in an Overpressure:</b>		
<b>- If Pipeline or Equipment Overpressured:</b>		
<b>- If Equipment Not Installed Properly:</b>		
<b>- If Wrong Equipment Specified or Installed:</b>		
<b>- If "Other Incorrect Operation:</b>		
1. Describe:		
<b>Complete the following if any Incorrect Operation sub-cause is selected.</b>		
2. Was this Incident related to: (select all that apply)		
- Inadequate procedure		
- No procedure established		
- Failure to follow procedure		
- Other		
	- If Other, Describe:	



3. What category type was the activity that caused the Incident:	
4. Was the task(s) that led to the Incident identified as a covered task in your Operator Qualification Program?	
4a. If Yes, were the individuals performing the task(s) qualified for the task(s)?	

**G8 - Other Incident Cause** - only one sub-cause can be selected from the shaded left-hand column

<b>Other Incident Cause - Sub-Cause:</b>	Miscellaneous
<b>- If Miscellaneous:</b>	
1. Describe:	Leak on customer piping is unknown.
<b>- If Unknown:</b>	
2. Specify:	

#### PART H - NARRATIVE DESCRIPTION OF THE INCIDENT

Leak on customer owned piping.

<b>File Full Name</b> Note: The users have to sign in to view the attachment if there is no current user session.

#### PART I - PREPARER AND AUTHORIZED SIGNATURE

Preparer's Name	Kathleen McNamara
Preparer's Title	Manager NE Dispatch and Scheduling
Preparer's Telephone Number	508-421-7450
Preparer's E-mail Address	kathleen.mcnamara@nationalgrid.com
Preparer's Facsimile Number	
Authorized Signature	
Authorize Signature's Name	Gary Bennett
Authorized Signature's Title	Director US Dispatch and Scheduling
Authorized Signature Telephone Number	617-839-7208
Authorized Signature's Email Address	gary.bennett@nationalgrid.com
Date	08/07/2013

## **EXHIBIT 2**

### **Winthrop Fire Department Report**



Winthrop Fire Department  
Incident Report

Page: 1  
12/12/2012

Incident #: 12-343-IN Exp. 0

Call #: 12-114

Location: 627 PLEASANT STREET / 1 FAMILY  
627 PLEASANT ST  
WINTHROP, MA 02152

Census Tract: 1805-00  
District: District 2

Officer In Charge: SWARTZ, RICHARD M. on 02/23/2012  
Report By: SWARTZ, RICHARD M. on 02/23/2012  
Approved By: FLANAGAN, PAUL E. on 02/27/2012

Basic Incident Information

Incident Type: **Building Fire**  
Property Use: 1 or 2 family dwelling  
Actions Taken: Extinguishment by fire service personnel

Owner: 627 PLEASANT STREET / 1 FAMILY  
KEVIN HOBSON  
627 PLEASANT ST  
WINTHROP, MA 02152

Property Loss: \$350000  
Contents Loss: \$350000

Pre-Incident Value: Undetermined  
Pre-Incident Value: Undetermined

Resources Used Summary

Alarm: 02/23/2012 @ 0815  
Cleared: 02/23/2012 @ 1408

Arrived: 02/23/2012 @ 0825

Alarms: 1

Aid: None

Suppression: Apparatus  
EMS: 0  
Other: 1

Suppression: Personnel  
EMS: 0  
Other: 1

Casualties Summary

Fire Service: Deaths  
Civilian: 0

Fire Service: Injuries  
Civilian: 0

People and Entities Involved

Type

Sex Age Home #

Work #



Winthrop Fire Department  
Incident Report

Page: 2  
12/12/2012

Incident #: 12-343-IN Exp. 0

Fire

Buildings involved: 0  
Residential living units: 1  
Acres Burned:

Area of origin: Heating room or area, water heat  
Cause of ignition: Cause undetermined after investigation  
Heat source: Undetermined  
Item first ignited: Flammable liquid/gas - uncontained  
Type of material: Natural gas

1st Contributing Ignition Factor:  
2nd Contributing Ignition Factor:

Mobile Property Involved: None

Pre-fire plan available: No

Structure

Structure type: Enclosed building  
Building status: In Normal Use  
Main floor size: 30' x 35'

Stories above grade: 2  
Stories below grade: 1

Story of fire origin: -1  
Fire spread: Confined to room of origin  
Stories with minor damage:  
Stories with significant damage:  
Stories with heavy damage:  
Stories with extreme damage:

Detector presence: Undetermined  
Type: Undetermined  
Power: Undetermined

Automatic extinguishment system: None Present

State

Critical incident: No

Winthrop Fire Department  
Incident Report

Page: 3  
12/12/2012

Incident #: 12-343-IN Exp. 0

**NARRATIVE FOR CAPTAIN RICHARD M SWARTE**

**Ref: 12-343-IN**

**Entered: 02/23/2012 @ 1438      Entry ID: P121**  
**Modified: 02/23/2012 @ 1438      Modified ID: P121**

**Call for explosion at 627 Pleasant Street. Found fire showing from a house that had an explosion. All victims out of house on arrival. Signal 199.**

**Chief on scene ordered second alarm.**

**To scene: National Grid gas, National Grid electric, State Fire Marshal Investigators, Department of Public Utility Inspectors**

**Action Ambulance transported one victim to MGH.**

**To Fire: Massport Engine 5, Chelsea Engine 3 Ladder 2, Revere Engine 1**

**Cover: Everett Engine 3 to E1, Boston Engine 10 Ladder 21 Cover Hqtrs.**

## **EXHIBIT 3**

### **Sequence of Events and Odor Call Transcript**



National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
December 14, 2012

Information Request PL 1-2

**Respondent:** Kathleen McNamara

**Request:** Provide a sequence of events and a description of the Incident. Include all records that demonstrate: (1) the time National Grid was notified of the Incident; and (2) when Dispatch notified the leak responder, crew and supervisor( s) to report to the Incident. Include in your response documentation on their arrival times; and when National Grid initiated an Emergency Notification to staff.

**Response:** On February 23, 2012, National Grid received an odor call from the customer at 7:54 am and immediately dispatched a technician to the address. The technician arrived at 8:23 am. In the interim, National Grid received a call from the Winthrop Fire Department at 7:58 notifying us of a disturbance at the property. National Grid notified the Massachusetts Department of Public Utilities at 8:45 am.

National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
December 14, 2012

Information Request PL 1-3

**Respondent:** Nancy Concemi

**Request:** Provide the time National Grid received the odor complaint call from the owner of 627 Pleasant Street, Winthrop and transcripts of all conversations between the National Grid representative and the homeowner.

**Response:** National Grid received odor call from the customer at approximately 7:54 am on February 23, 2012. Attached please find a copy of the recorded call marked as Exhibit PL 1-3.

Customer Representative: Thank for calling National Grid gas service and this is Vernon. How may I assist you?

Customer: I have a smelling of gas in my house

Customer Representative: Okay, what address is that, please?

Customer: What

Customer Representative: Yes, what address is that?

Customer: Hello, 627 Pleasant Street, Winthrop Mass

Customer Representative: Your accent sir, I'm sorry I am losing you. I heard Winthrop and I heard 27 which street

Customer: 6-2-7 Pleasant Street

Customer Representative: Pleasant Street

Customer: Winthrop Mass

Customer Representative: Pleasant Street, thank you and the name it is under

Customer: Sherian Hobson

Customer Representative: Ok, so where did you smell the odor this morning

Customer: Some downstairs

Customer Representative: From downstairs

Customer: And it is through the house right now

Customer Representative: Are you at home right now and or anybody over the age of 18 right now

Customer: I'm at home

Customer Representative: I'm sorry you are at home or are not at home

Customer: I'm at home

Customer Representative: You are at home, what's your phone number you're calling from right now



Customer: Well um 617-539-3307

Customer Representative: Okay 4407. The number on file

Customer Representative: So in the meantime do not light any matches, some people want to get rid of the odor, don't light any matches, don't plug anything in or unplug anything because that could cause a spark, whatever on leave on whatever off leave off and we'll get someone out there within the hours and more than likely a lot less than that to be honest but within the house to 627 Pleasant Street in Winthrop. Alright sir,

Customer: Alright

Customer Representative: Alright sir

National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
January 4, 2013

Information Request PL 1-15

**Respondent:** Chris Manning

**Request:** Provide all records documenting leak history and maintenance work performed on customer owned piping or appliances to the gas customer from January 1, 2002 to February 22, 2012.

**Response:** None



## **EXHIBIT 4**

### **Photographs:**

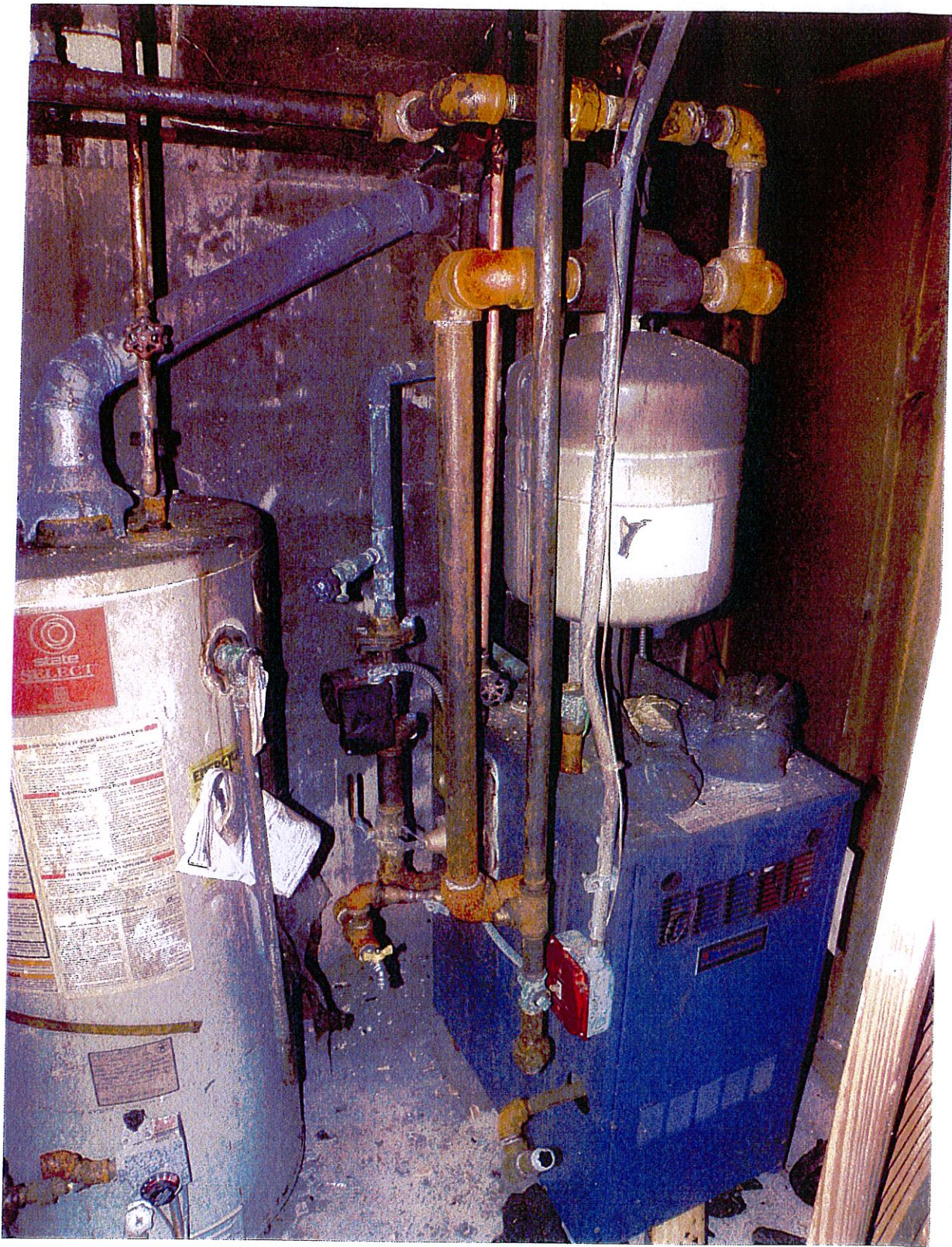
- 4(a) - 627 Pleasant Street, Winthrop - Residential Area**
- 4(b) - 627 Pleasant Street, Winthrop - Furnace and water heater in basement**
- 4(c) - 627 Pleasant Street, Winthrop - First floor gas stove**
- 4(d) - 627 Pleasant Street, Winthrop - Fire Damage**
- 4(e) - 627 Pleasant Street, Winthrop - Debris on right side of structure**
- 4(f) - 627 Pleasant Street, Winthrop - Sump pump in basement floor**
- 4(g) - 627 Pleasant Street, Winthrop - Water service**





4(a) - 627 Pleasant Street, Winthrop - Residential Area





4(b) - 627 Pleasant Street, Winthrop – Furnace and water heater in basement





4(c) - 627 Pleasant Street, Winthrop - First floor gas stove





4(d) - 627 Pleasant Street, Winthrop - Fire Damage





4(e) - 627 Pleasant Street, Winthrop – Debris on right side of structure





4(f) - 627 Pleasant Street, Winthrop - Sump pump in basement floor





4(g) - 627 Pleasant Street, Winthrop - Water service



## **EXHIBIT 5**

**Gas Main Records, Map of Pleasant Street, Winthrop**

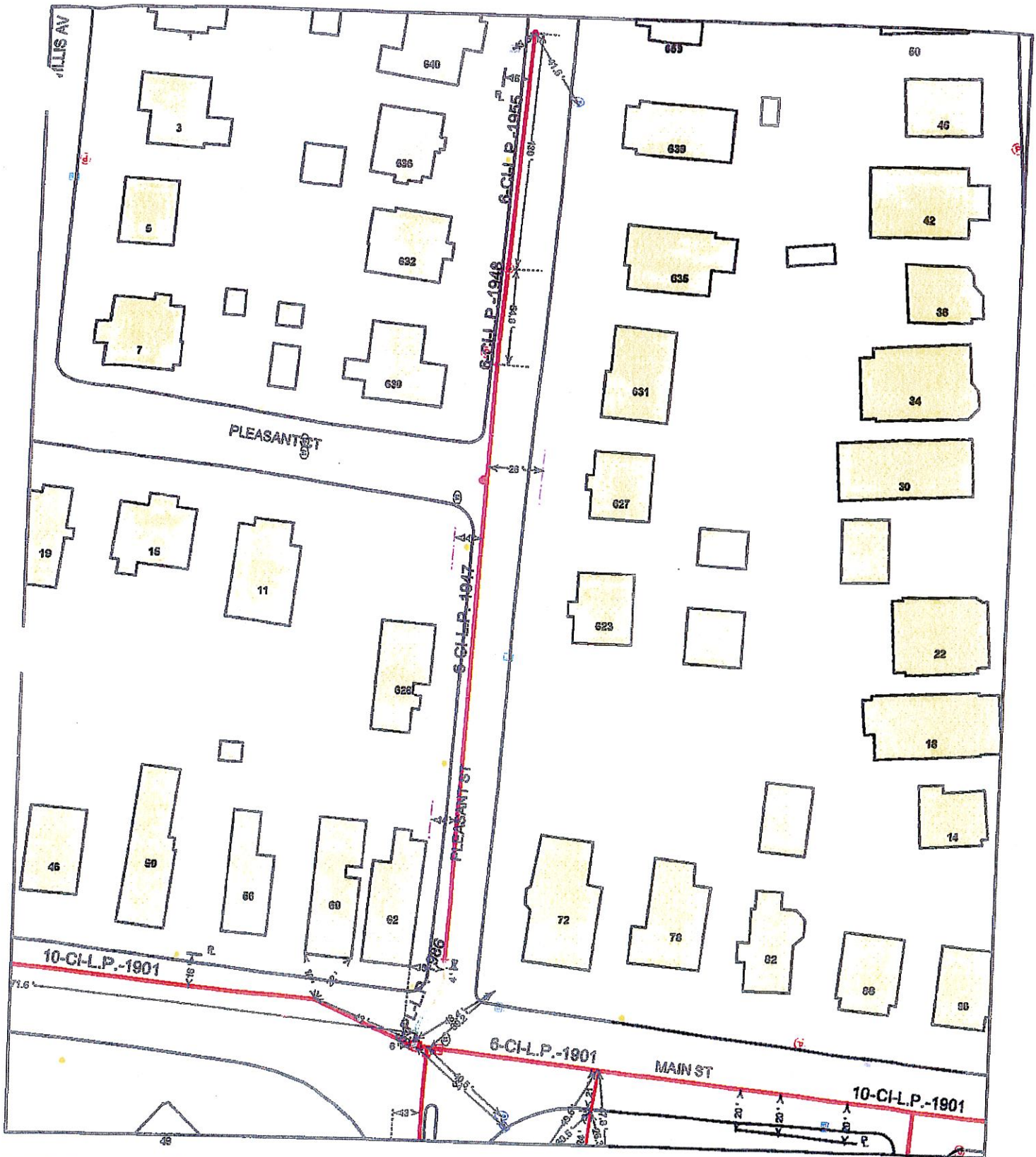
National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
December 14, 2012

Information Request PL 1-12

**Respondent:** James Hughes

**Request:** Provide records of the main servicing 627 Pleasant, Winthrop including but not limited to, installation date, MAOP, operating pressure and leak history from January 1, 2002 to February 22, 2012.

**Response:** The main that services 627 Pleasant Street, Winthrop is a six inch low pressure cast iron with various installation dates including, 1947, 1948, and 1955 depending on the section of Pleasant Street. The operating pressure is between 8 to 12 inches Water Column (w.c.) with an MAOP of 14 inches w.c. National Grid has no record of any main leaks between January 1, 2002 to February 22, 2012. Please see map of the main that was provided in response to IR PL 1-6.



## 627 PLEASANT ST, WINTHROP

- Distribution Main**
- Cell other values
- Type, Pressure Class**
- Bar Steel, High Pressure
  - Bar Steel, Intermediate Pressure
  - Bar Steel, Low Pressure
  - Bar Steel, Transmission Pressure
  - Cast Iron, High Pressure
  - Cast Iron, Intermediate Pressure
  - Cast Iron, Low Pressure
  - Coated Steel, High Pressure
  - Coated Steel, Intermediate Pressure
  - Coated Steel, Low Pressure
  - Coated Steel, Transmission Pressure
  - Copper, Low Pressure
  - High Density Plastic, High Pressure
  - High Density Plastic, Intermediate
  - High Density Plastic, Low Pressure
  - High Density Plastic, Transmission Pressure
  - Plastic, High Pressure
  - Plastic, Intermediate Pressure
  - Plastic, Low Pressure
  - Plastic, Transmission Pressure
  - Wrought Iron, High Pressure
  - Wrought Iron, Intermediate Pressure
  - Wrought Iron, Low Pressure

NOTE 1: The location of every pipe and service connection shall be determined by the owner of the property, as well as the proper depth and depth shall be noted on the drawing.

NOTE 2: The owner is responsible for the maintenance of the system. The owner shall be responsible for the maintenance of the system, as well as the proper depth and depth shall be noted on the drawing.

0 0.0025 0.007 0.015  
Miles



National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
December 14, 2012

Information Request PL 1-18

**Respondent:** Jeffrey O'Brien

**Request:** Provide a copy of any Dig Safe notices received for sewer, water and drain work on Pleasant Street? Provide Dig Safe notices and completion forms.

**Response:** Attached as Exhibit PL-18, please find Dig Safe notices and completion forms from January 1, 2011 up until the date of the incident.

## **Exhibit PL 1-18**

## MARKOUT DETAILS

DISPLAY

Date: 17-DEC-2012

Request No	20120401094	Ref. Request No		Company	BGE			
Received Date	24-JAN-2012	08:08:AM	Reference	RD	Type	EMERGENCY		
Transmission Date	24-JAN-2012	06:09:AM	Premarked	Y	Town	WINTHROP		
Target Date	24-JAN-2012	10:08:AM	Locator	23439	Status		Mains	
Address	PLEASANT ST EDGEHILL RD						WNT	MA
To Address								
Nearest Cross St 1								
Nearest Cross St 2								
Location	AT INTER							
Nature of Work	EMERG WATER VALVE REPLAGE						Latitude	42.3778000
Extent of Work	IN RD						Longitude	-70.8920800
Start Date	01/24/2012		Start Time	08:00:AM				
Caller	STEVE CALLA		Title	OPERATION MNGR				
Phone#	617-846-1249 617-212-5193		Fax#	617-239-1545				
Return Call	7-330		Email Id					
Contractor	WINTHROP WATER DEPT							
Contractor Address	100 KENNEDY DR. WINTHROP, MA 02152							
Excavator	SAME							

Completion Details

Locators

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Query

FDC Completion Details

Reference Tickets





## COMPLETION MARKOUT'S DETAIL - PAGE 1

Locator #

23439

Locator Name

GIERARDI

Date: 17-DEC-2012

Digsafe #:

20120401094

SGC

Reported Loc:

PLEASANT ST/EDGEHILL RD/WNY

Markout Date:

24-JAN-2012 08:03

Actual Loc:

☒ Visited site☐ Contractor premarked location☐ No Gas Involved

Method(s) of Locating

Measure:

☒ SPIPE☐ AMMS☐ Microfiche☐ Other

How Located:

☐ Direct☒ Indirect

# mains marked:

2

# of services marked:

0

For each main marked

Photo Taken?

Size:

8

Material:

PLASTIC

Footage:

8

Size:

8

Material:

CAST IRON

Footage:

6

Size:

12

Material:

CAST IRON

Footage:

7

Size:

Material:

Footage:

0

Size:

Material:

Footage:

3

First roll #

EM

Frame from

1

to

2

Second roll #

Frame from

to

Next Page

Follow Up

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Query

Exit

## COMPLETION MARKOUTS DETAIL - PAGE 2

☐ Ongoing job

Final Completion Date

27-JAN-2012 09:53

Follow up work

☐ Encroachment☐ Blasting☐ Contractor on adverse list

Other follow up

1)

2)

If other follow up, notified supervisor:

How contacted contractor

# of pipes exposed:

Comments

Prev. Page

Follow Up

Query



MARKOUT DETAILS - HISTORY

DISPLAY

Date: 17-DEC-2012

Request No 20113201364

Ref. Request No 0

Company BGT

Received Date 01-AUG-2011 11:16 AM

Reference NO

Type N

NORMAL

Transmission Date 01-AUG-2011 11:16 AM

Premarked Y

Town

WINTHROP

Target Date 04-AUG-2011 11:16 AM

Locator 126-1

Status

Mains

Address 401 PLEASANT ST

WINT

MA

To Address

Nearest Cross St 1 BROOKFIELD RD

Nearest Cross St 2 COURT RD

Location

Nature of Work ORST DRAINAGE

Latitude

Extent of Work PRI PROP ENTIRE

Longitude

Start Date 08-04-2011

Start Time 11:16 AM

Caller PAUL CARNEY

Title

PRES

Phone# 617-312-0115 / 617-846-7290

Fax#

617-846-7233

Return Call 8:50 PM

Email Id

PAULCARNEY74@VERIZON.NET

Contractor SEACOA ST CONTR INC

Contractor Address 16 REVERE ST, WINTHROP, MA 02452

Excavator SAME

Completion Details

Locations

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Query

FDC Completion Details

Reference Tickets



COMPLETION MARKOUTS(HISTORY) DETAIL - PAGE 1

Locator: 12684      Locator Name: D'ELLISOLA      Date: 17-DEC-2012

Digsafe #: 20113201364      Reported Loc: 401 PLEASANT ST WYNT

Marked Date: 04-AUG-2011 00:00      Actual Loc:

- ☒ Visited site
- ☒ Contractor premarked location
- ☐ No Gas Involved

Method(s) of Locating

Measure:

- ☒ SPIPE      ☐ Microfiche
- ☐ AMMS      ☐ Other

How Located:

- ☒ Direct
- ☐ Indirect

# mains marked: 1

# of services marked: 1

For each main marked

Size:	Material:	Footage:

Photo Taken?

First roll #: 01100

Frame from 00 to 0

Second roll #:

Frame from to

Next Page

Follow Up

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Query

Exit

COMPLETION MARKOUTS(HISTORY) DETAIL - PAGE 2

☐ Ongoing job

Final Completion Date

14-AUG-2011 08:58

Follow up work

☐ Encroachment

☐ Blasting

☐ Contractor on adverse list

Other follow up

1)

2)

If other follow up, notified supervisor:

How contacted contractor

# of pipes exposed:

Comments

MARKED SERVICE

Prev. Page

Follow Up

Query



## MARKOUT DETAILS - HISTORY

DISPLAY

Date: 17-DEC-2012

Request No	20113205074	Ref. Request No	0	Company	BGI
Received Date	03-AUG-2011 06:01:AM	Reference	NO	Type	EMERGENCY
Transmission Date	03-AUG-2011 06:02:AM	Premarked		Town	WINTHROP
Target Date	03-AUG-2011 10:01:AM	Locator	22893	Status	C
Address	362 PLEASANT ST			Mains	
To Address				WNT	SEA
Nearest Cross St 1	MAIN ST				
Nearest Cross St 2	PAULINE ST				
Location					
Nature of Work	EMERG WATER REPAIR			Latitude	
Extent of Work	WORKING ST & SIDEWALK			Longitude	
Start Date	08-03-2011	Start Time	06:30:AM		
Caller	STEVE CALLA	Title	OPERATION MNGR		
Phone#	517-846-1248, 517-212-5193	Fax#	517-839-1646		
Return Call	7-330	Email Id			
Contractor	WINTHROP WATER DEPT				
Contractor Address	100 KENNEDY DR, WINTHROP, MA 02152				
Excavator	SAHIE				

Completion Details

Locators

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Query

FDC Completion Details

Reference Tickets

## COMPLETION MARKOUTS(HISTORY) DETAIL - PAGE 1

Location: 22883

Locator Name: DEPHIN, JR

Date: 17-DEC-2012

Digsafe #: 2011320807-

BGC

Reported Loc: 352 PLEASANT ST, WNT

Markout Date: 03-AUG-2011 08:57

Actual Loc:

☒ Visited site☐ Contractor premarked location☐ No Gas Involved

## Method(s) of Locating

## Measure:

☐ SPIPE☐ AMMS☐ Microfiche☒ Other

## How Located:

☐ Direct☒ Indirect

# mains marked: 1

# of services marked: 0

## For each main marked

## Photo Taken?

Size: 6

Material: CAST IRON

Footage: 1F

First roll #

Size:

Material:

Footage:

Frame from

Size:

Material:

Footage:

Second roll #

Size:

Material:

Footage:

Frame from

Size:

Material:

Footage:

Next Page

Follow Up

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Query

Exit



## COMPLETION MARKOUTS(HISTORY) DETAIL - PAGE 2

☐ Ongoing Job

Final Completion Date

03-AUG-2011 08:57

Follow up work

☐ Encroachment☐ Blasting☐ Contractor on adverse list

Other follow up

1)

2)

REF. EQ

If other follow up, notified supervisor:

How contacted contractor

# of pipes exposed:

Comments

MARK 1 MAIN

Prev. Page

Follow Up

Query

MARKOUT DETAILS - HISTORY

DISPLAY

Date: 17 DEC 2012

Request No	20113906461	Ref. Request No		Company	BGC
Received Date	21 SEP 2011 11:20:AM	Reference	NO	Type	NORMAL
Transmission Date	21 SEP 2011 11:21:AM	Premarked	X	Town	WINTHROP
Target Date	26 SEP 2011 11:21:AM	Locator	12684	Status	IC
Address	PLEASANT ST			Mains	
To Address				WNT	MA
Nearest Cross St 1	BELLEVUE AVE				
Nearest Cross St 2	SOMERSET AVE				
Location	WKS ON PLEASANT ST FROM BELLEVUE AVE TO SOMERSET AVE, INCLUDING INTER				
Nature of Work	WATER MAIN CONNECT			Latitude	
Extent of Work	WKG IN ST ONLY			Longitude	
Start Date	09/26/2011	Start Time	11:15:AM		
Caller	JOHN GREEN	Title	FOREMAN		
Phone#	978-452-6967	Fax#	978-452-6901		
Return Call	ANYTIME	Email Id	INORP@OFFICEOFFICE.COM		
Contractor	DEFECICE CORP				
Contractor Address	20 SILVER LN. DRACUT, MA 01926				
Excavator	SAME				

Completion Details

Locators

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Query

FDC Completion Details

Reference Details



## COMPLETION MARKOUTS(HISTORY) DETAIL - PAGE 1

Locator

225

Locator Name

D.BELLISOLA

Date:

17-DEC-2012

Digsafe #:

20113906461

BGC

Reported Loc:

PLEASANT ST WNT

Markout Date:

26-SEP-2011 13:06

Actual Loc:

☒ Visited site☒ Contractor premarked location☐ No Gas Involved

Method(s) of Locating

Measure:

☒ SPIRE☐ AMMS☐ Microfiche☐ Other

How Located:

☐ Direct☒ Indirect

# mains marked:

1

# of services marked:

1

For each main marked

Photo Taken?

Size: 8

Material:

CAST IRON

Footage:

300

First roll #

CD100

Size:

Material:

Footage:

Size:

Material:

Footage:

Size:

Material:

Footage:

Size:

Material:

Footage:

Frame from

578

to

579

Second roll #

Frame from

to

Next Page

Follow Up

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&gt;&gt;

Query

Exit

## COMPLETION MARKOUTS(HISTORY) DETAIL - PAGE 2

☒ Ongoing job

Final Completion Date

28 SEP 2011 13:06

Follow up work

☐ Encroachment☐ Blasting☐ Contractor on adverse list

Other follow up

1) 2) 

If other follow up, notified supervisor:

How contacted contractor

# of pipes exposed:

Comments

231 233 LEFT CARD

MARKED MAIN AND SERVICE TO 217

Prev. Page

Follow Up

Query



## COMPLETION MARKOUTS(HISTORY) DETAIL - PAGE 1

Locator 12684

Locator Name D PELLISOLA

Date: 17-DEC-2012

Digsafe #: 20113508281

BGC

Reported Loc: PLEASANT STREET

Markout Date: 23-SEP-2011 14:24

Actual Loc:

☒ Visited site☒ Contractor premarked location☒ No Gas Involved

## Method(s) of Locating

Measure:

☒ SPIPE☐ AMMS☐ Microfiche☐ Other

How Located:

☐ Direct☒ Indirect

# mains marked: 1

# of services marked: 5

## For each main marked

## Photo Taken?

Size: 6

Material: CAST IRON

Footage: 998

First roll #: CC100

Size:

Material:

Footage: 0

Frame from 01 to 08

Size:

Material:

Footage: 0

Second roll #

Size:

Material:

Footage: 0

Frame from to

Size:

Material:

Footage: 0

Next Page

Follow Up

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Query

Exit

☒ Ongoing job

Final Completion Date

Follow up work

☐ Encroachment

☐ Blasting

☐ Contractor on adverse list

Other follow up

1)

2)

If other follow up, notified supervisor:

How contacted contractor

OTHER

# of pipes exposed:

Comments

CSI 233 LEFT CARD

Prev. Page

Follow Up

Query



Request No	20110205450	Ref. Request No	0	Company	BGC
Received Date	23-DEC-2011 11:18:AM	Reference	NO	Type	EMERGENCY
Transmission Date	23-DEC-2011 11:18:AM	Premarked	Y	Town	WINTHROP
Target Date	23-DEC-2011 03:19:PM	Locator	12884	Status	Mains
Address	WALDEMAR AVE PLEASANT ST				
To Address	WINT MA				
Nearest Cross St 1					
Nearest Cross St 2					
Location	CORNER PROP WALDEMAR AVE PLEASANT ST ADDRESS IS 82 WALDEMAR AVE WIRK ON PLEASANT ST SIDE				
Nature of Work	EMERGENCY WATER SERVICE REPAIR				
Extent of Work	SIDEWALK AREA	Latitude	42.4751600		
Start Date	12/23/2011	Longitude	-70.8916700		
Start Time	2:00:PM				
Caller	STEVE CALLA	Title	OPERATION MGR		
Phone#	817-846-1248 817-212-5193	Fax#	817-639-1644		
Return Call	7-300	Email Id			
Contractor	WINTHROP WATER DEPT				
Contractor Address	100 KENNEDY CR. WINTHROP, MA 02152				
Excavator	SAME				

Completion Details

Locators

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Query

PDC Completion Details

Reference Ticket

## COMPLETION MARKOUTS DETAIL - PAGE 1

Locator: 12684 Locator Name: D. CELLISOLA Date: 17-DEC-2012

Digsafe #: 201152054 E0 BGC

Reported Loc: WALDEN AR AVE-PLEASANT ST WNT

Markout Date: 23-DEC-2011 10:48

Actual Loc:

☒ Visited site☒ Contractor premarked location☒ No Gas Involved

## Method(s) of Locating

## Measure:

☒ SPIPE☐ AMMS☐ Microfiche☐ Other

## How Located:

☐ Direct☒ Indirect

# mains marked: 0

# of services marked: 0

## For each main marked

## Photo Taken?

Size:	Material:	Footage:

First roll #	
Frame from	to
Second roll #	
Frame from	to

Next Page

Follow Up

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Query

Exit



COMPLETION MARKOUTS DETAIL - PAGE 2

☐ Ongoing job

Final Completion Date

23-DIV-2011 13:48

Follow up work

☐ Encroachment

☐ Blasting

☐ Contractor on adverse list

Other follow up

1)

2)

If other follow up, notified supervisor:

How contacted contractor

IN PERSON

# of pipes exposed:

Comments

NO GAS

Prev. Page

Follow Up

Query

## **EXHIBIT 6**

**Gas service records - 627 Pleasant Street, Winthrop**



**Information Request PL 1-13**

**Respondent:** James Hughes

**Request:** Provide records of the gas service at 627 Pleasant, Winthrop including but not limited to, installation date, MAOP, operating pressure and leak history from January 1, 2002 to February 22, 2012.

**Response:** The service to #627 Pleasant St was 1 inch plastic, installed on 04/24/1986. The pressure test listed on the attached service card indicates a 90 psig test for 15 minutes. The operating pressure and MAOP is the same as the main as answered in IR PL-12. There is no leak history on the service between January 1, 2002 and February 22, 2012. The service card for this address is attached as Exhibit PL 1-13.

# SERVICE CARD

NO. 627 Pleasant St

ST. (CITY) Waukegan

SERVICE FROM same

SIZE 1" DATE 1/4" SALES NON-SALES ☒ PERMIT NO. ST.

NEW RELAY ☒ RELOCATE ☐ ABAND. ☐ WORK DATE 4/24/86 MAIN TO L.L. 27 L.L. TO END 23'

MAIN DATA SIZE 6" DEPTH 3' TAP SIZE 1" PRESSURE LOW ☒ INT. ☐ MED. ☐ HIGH ☐ CONDITION OF MAIN Good

ROADWAY SIDEWALK

CREW LEADER

NO. 2 ORDER NO.

AIRTEST AREA FUNCTION JOB NUMBER

1/5 170 4124 71838 1 1 1

MIN'S PRESSURE

SIZE TYPE FOOTAGE ABANDONED PIPE SIZE TYPE FOOTAGE INSERT ☒ DIRECT BURIAL ☐

1" 12 50 FT

REMARKS:

PLASTIC INSERT

M.G.S. REC. EXPROITER DRAFTING

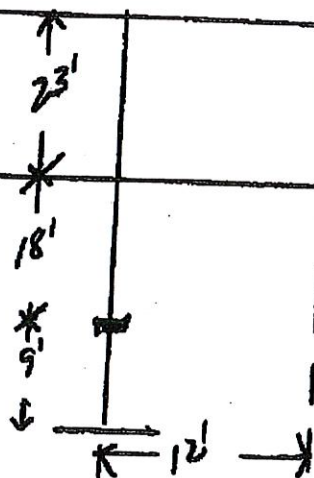
FORM NO. 248 REV. 5/85



#627

...

Pleasant



National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
December 14, 2012

Information Request PL 1-14

**Respondent:** James Hughes

**Request:** Provide records for any maintenance or replacement work performed on the gas services at 627 Pleasant, Winthrop from January 1, 2002 to February 22, 2012.

**Response:** Other than installing the service in April, 1986, National Grid has no other records of maintenance or replacement activity at this address.



## **EXHIBIT 7**

### **Leak Investigation and Leak Survey Reports, Post-Incident Photographs**

- 7(a) - National Grid response PL 2-9**
- 7(b) - National Grid responses PL 1-10 and PL 2-8**
- 7(c) - Gas reading at curb**
- 7(d) - Street typography**
- 7(e) - Sewer Manhole**

National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
April 4, 2013

Information Request PL 2-9

Respondent: Michael Verrell

- Request: Department investigator notes taken the day of the Incident state that National Grid's supervisor, Mike Verrell, provided the investigators with the details of a leakage survey the Company performed after the Incident, but before the Department investigators arrived. Please provide complete and detailed documentation to confirm (or correct), the following facts:
- (a) National Grid reported that it detected a 55 percent gas reading in the sidewalk area of 627 Pleasant Street, near a tree;
  - (b) National Grid reported that the reading bled down to 20 percent gas;
  - (c) National Grid reported that it detected no other readings in the front lawn area of the house at 627 Pleasant Street;
  - (d) National Grid reported that it detected a 20 percent gas reading in the street over the cast iron main;
  - (e) National Grid reported that the Company detected no gas readings inside nos. 631 and 623 Pleasant Street;
  - (f) National Grid reported that the Company detected a half percent gas reading in the sewer manhole adjacent to the service line to no : 627 Pleasant Street;
  - (g) National Grid reported that the Company detected one percent gas in the sewer trap located in the basement of 630 Pleasant Street;

Response: Michael Verrell has confirmed the accuracy of the above-referenced information. Please see National Grid's responses to IR PL 1-23, IR PL 1-5, IR PL 1-10. IR PL 2-8.



National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
National Grid  
January 4, 2013

Information Request PL 1-10

**Respondent:** Chris Manning

**Request:** Provide the results of the leak investigation performed on February 23, 2012 including but not limited to FDC completion records, Work Orders and all applicable premise condition reports.

**Response:** No leaks were found in the surrounding area checks. To date, we have not been able to locate the premise condition reports and will supplement this response if they are located. Attached as Exhibit PL1-10, please find CAD orders and FDC completion reports.

**Order Detail**

BOSTON

**MASTER ORDER DETAIL**

Customer Name: SHERIAN HOBSON

Account #: 04371613901

Address: 627 PLEASANT ST N/A

Town/Zip: WNT / 02152

Host Ord Create Dt: 2/23/2012 7:56:14 AM

Service Rep: 12390

CICS Term ID: %624

Taken By: 15219

Group: S

Dispatcher: 93599

Disp Time: 2/23/2012 8:04:24 AM

Tran Code: L\*1

Class: E

Reported By: SHERIAN

Reissue: 001

Appointment Dt: 2/23/2012

WTD From: 2/23/2012

WTD To: 2/23/2012

Meter Num: 00P926216

Size: 2148

Lken: 06

Inst: 20100218

ERT Num: 063451952

ERT Batt: -

Telephone 1: 6175394407

Telephone 2: 6175394407

**Special Instructions**

Call: ODOR IN BASEMENT\*\*

Sys: Pend Ord: N \* Verify Mtr: N \* Chg Mtr: N \* Theft: N \* Contract: \* Spc  
SHERIAN \*

Disp:

**GENERAL COMPLETION DETAIL (10573)**

Job Codes: LK ST RT

Job Mins: 130

CRIS Codes: 038 018 00

Job Mins: 130

EnRoute: 2/23/2012 8:04:43 AM EnRoute Override:

Flu Check: N

OnSite: 2/23/2012 8:23:49 AM OnSite Override:

Comp Date: 2/23/2012 10:33:59 AM

Warning:

Gas On:

Mtr Lck:

Appl Lck:

Tag Posted:

Tag Location:

Aff Appl:

Problem Found:

Referred To:

Prev-Rem Meter#: 00P926216 Correct Meter #:

Set Meter #:

Set Read:

On-Off Rem Read:

Set Size:

Set ERT#:

Set Dials:

Set Locn:

RG: 01

WH: 01

DR: 01

HH: 01

SH: 00

AC: 00

OTH: 00

Comments: area chk ok mobile fi ok



New Customer Name:

Safety Gas Reading			
	Check?	Reading	Loc
Service	N	000	
Water		000	
Sewer		000	
Electric		000	
Wall		000	
Barhole Svc		000	
Perimeter		000	
CO Test (PPM)		0000	
Check Flue	N		

**ORDER NUMBER INFORMATION**

CAD Order  
Num: 10573

CAD Date/Time: 2/23/2012 7:56:14  
AM

CSS Order  
Num: 05405000048

Top

**Order Detail**

BOSTON

**MASTER ORDER DETAIL****Customer Name:** TONI BONCORE/MAT TITEMORE**Account #:** 04371613991**Address:** 632 PLEASANT ST N/A**Town/Zip:** WNT / 02152**Host Ord Create Dt:** 2/23/2012 6:01:05 PM**Service Rep:** 23175**CICS Term ID:** %449**Taken By:** 17361**Group:** S**Dispatcher:** 92583**Disp Time:** 2/23/2012 6:03:20 PM**Tran Code:** L\*3**Class:** E**Reported By:** MATT**Reissue:** 001**Appointment Dt:** 2/23/2012**WTD From:** 2/23/2012**WTD To:** 2/23/2012**Meter Num:** 00X152584**Size:** 2176**Lken:** 23**Inst:** 20100317**ERT Num:** 007010878**ERT Batt:** -**Telephone 1:** 7818448844**Telephone 2:** 7818448844**Special Instructions****Call:** PER DISPTACH/CK FOR SAFETY\*\***Sys:** Pend Ord: N \* Verify Mtr: N \* Chg Mtr: N \* Theft: N \* Contract: \* Spc  
\***Disp:****GENERAL COMPLETION DETAIL** (11598)**Job Codes:** LK**Job Mins:** 29**CRIS Codes:** 039 020 00**Job Mins:** 29**EnRoute:** 2/23/2012 6:03:39 PM **EnRoute Override:****Flu Check:** Y**OnSite:** 2/23/2012 6:20:28 PM **OnSite Override:** 2/23/2012 6:23:00 PM**Comp Date:** 2/23/2012 6:51:55 PM**Warning:****Gas On:****Mtr Lck:****Appl Lck:****Tag Posted:****Tag Location:****Aff Appl:****Problem Found:****Referd To:****Prev-Rem Meter#:** 00X152584 **Correct Meter #:****On-Off Rem Read:****Set Meter #:****Set Read:****Set Dials:****Set Locn:****Set Size:****Set ERT#:****RG:** 01**WH:** 01**DR:** 00**HH:** 01**SH:** 01**AC:** 00**OTH:** 00**Comments:** vt INSD WALLS APPLS CK OK



New Customer Name:

Safety Gas Reading			
	Check?	Reading	Loc
Service	Y	000	
Water		000	
Sewer		000	
Electric		000	
Wall		000	
Barhole Svc		000	
Perimeter		000	
CO Test (PPM)		0000	
Check Flue	Y		

**ORDER NUMBER INFORMATION**

CAD Order  
Num: 11598

CSS Order  
Num: 05405000595

CAD Date/Time: 2/23/2012 6:01:05  
PM

Top

Work Order	817491	Region/Company	NEGBGC	Work Type	ER	Status	CASBUILT
Location	931702	627 PLEASANT ST, WNT		Status Due Date		Date Received	2012-02-23-0.00.00
Direction		Int. Street 1	PLEASANT CT	Town	WNT	Location Priority	
From		Int. Street 2	MAIN ST	WO Priority			
Belongs To		Reimbursable?		Pre Payment			

#### Contact Information

Requestor: BENTIVEGNA, JULIE A  
 Customer:  
 Phone: Ref: 01-PUBLIC

Violation/Delay Notifications CUE Damages Diary

#### Location Detail

Parking Reg  
 Svc Seq # 0  
 Billing Unit  
 SPIPE No 597882  
 Circuit #  
 Subsystem ID  
 Map/Grid  
 Tax District WNT

#### Problem

Failure Class LEAK  
 Problem Code 1  
 Leak Reading% 100  
 Upgraded Date

#### Classification

Job Plan  
 Program LK EMER  
 Safety Plan  
 PM

#### Responsibility

Own. Org. MSFMAL  
 Perf. Org. MSFMAL  
 Proj. Mgr.  
 Designer  
 Scheduler ERMAL  
 Crew Leader ARDIMP  
 Contr. Company  
 Contr. Contact

#### Associated Project/ Work Order Detail

Funding Project # MAL129  
 FWMS Project #  
 LMS # 828846  
 Ext Ref #  
 Status 1703

#### Scheduling Information

Start  
 Completion  
 Target  
 Scheduled  
 Actual 2012-02-23-8.33.00 2012-02-23-0.00.00  
 Customer Need/Appt. Date  
 Est. Dur. 0:00 Rem. Dur. Png./Sched?

#### Follow-up Work

Originating WO  
 Has Follow-up Work? N  
 Modified  
 By SMARTIME  
 Date 2012-02-28-0.23.0



Work Order 817491

WorkType ER

Status CASBUILT

Location 931702

627 PLEASANT ST, WNT

Town WNT

Operation 20

Standard Unit

Count 1

Loc 931702

627 PLEASANT ST, WNT

Completion Date 2012-02-23-0.01

## Repairs

Work Action LEAK

Paving Code 1

# Main FT Inspected

Repair sent to LMS? Y

Joint Seal Replaced?

Type of Joint Replaced

Reason for Failure

Facility Type SERVICE

Size 01

Material PL

Pressure

Where Leak LK PIPE

Leak Cause

OUTFORCE

Contributing Factor

Depth

8FT IN

Comments C/O AT MAIN

Construction Type AB

## Relights

RGO Performed? 0

House Heaters

Water Heaters

Standby?

Ranges

Other

Reconnect?

Comments

## Pressure Test

Pressure

Medium

Duration 0

Chart?

## Valve Inspections

Primary Valve?

Location Verified?

Valve Greased

Valve Box Cleaned

Valve Operability?

CGI Reading (% Gas)

Comments

Location 931702

627 PLEASANT ST, WNT

	Size	Material	Length	Date/Year	Vintage Year
Installed					
Retired	01	PL	50	2012-02-23-0.00.00	1984
Other Data	C/O AT MAIN				

Service Tap From Street same

Construction Type AB

Replacement Reason

Tap Size (in.) 01

Main Size (in.) 06

Main Mat'l CI

Cutoff Location MAIN

Pressure

## Location Information

Sketch Type 4

A (M-V) 0

B (V-Bldg) 0

Offset to Tap/EFV C 0

D 0

Offset to Valve/PropLine E 0

F 0

## Pressure Test

Pressure (PSIG)

Time (Mins)

Meter Location

Curb Valve

Installed?

Excess flow

valve installed?

Meter protection

Installed?



National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
April 4, 2013

Information Request PL 2-8

**Respondent:** Tatiana Roc

**Request:** On February 23, 2012, Department investigators arrived at 627 Pleasant Street, Winthrop, to investigate the release of gas. The investigators were informed that National Grid had performed a leakage survey of the Incident area prior to the Department investigators' arrival. Provide complete and detailed documentation for the following:

- (a) all leakage survey records conducted on February 23, 2012, including all surveys taken before the arrival of the Department investigators;
- (b) supervisor statements concerning the readings taken after the incident;  
And
- (c) supervisor statements regarding readings in any of the homes on Pleasant Street after the incident.

**Response:** Please see attached as Exhibit 2-8, a premise condition report for February 23, 2012 as well as hand written notes date taken the same date. National Grid does not have written statements of supervisors. National Grid did perform all required surveys following the incident. Please see responses to IR PL 1-10.

REPORTED ADDRESS		DATE OPENED		DATE ARRIVED		DATE LEFT		ZIP		SHEET	
FIRST SERV. REP.		EXECUTED BY:		EMP. NO.		P.M.		COMMENTS		OF	
627 Pleasant St WNT		23rd 12		23rd 12		23rd 12		02152		1 OF 1	
J. Bent		P. Benson		25164		840					
ADDRESS		TIME		TIME		TIME					
62 Main St		9:30		10:10		10:30		11:15		(Relocated)	
		READ		Ø		Ø		Ø		INS	
72 Main St		9:35		10:05		10:35		11:20			
		READ		Ø		Ø		Ø		INS	
626 Pleasant St		9:40		10:20		10:40		11:25		11:55	
		READ		Ø		Ø		Ø		INS	
623 Pleasant St		9:45		10:25		10:45		11:30		12:00	
		READ		Ø		Ø		Ø		INS	
640 Pleasant St		10:00									
		READ		Ø						INS	
		TIME									
		READ									
		TIME									
		READ									
4 house continuations		TIME									
Monitor Per Enclosure		READ									
LEAK INVESTIGATION COMPLETE		HAZARDOUS		NON-HAZARDOUS							
REVIEWED WITH DISTRIBUTION		DIST. CREW LEADER/SUPERVISOR		RELIEVED BY:		EMP. NO.					
LEAK CLASSIFICATION GRADE		1 2, 3, NA		LEAK SURVEY							
LEAK TURNED OVER TO DISTRIBUTION		YES (NO)		TIME TO DIST.		— AM PM					
LEAK CLOSED OUT		12:30		MONITOR SETUP		YES (NO)		MONITOR TIME FRAME		HOURS	

**BOSTON GAS-MANAGING SAFETY**

OTH 27'S CONTINUED REWINTER



626 Pleasant St. → No read ←

627 → Disturbance → cust to plastic right in front

631 → No reads

623 → No reads

632 →

635 →

636 → No gas service

639 →

640 →

641 →

PLEASANT ST

630	9:30	
632	9:40	9:15 # 11 - no gas - OK
631	10:00	9:25 # 15 - no gas - OK
635	10:10	
636	10:20	
639	10:36	
640	10:40	
641	6:50	

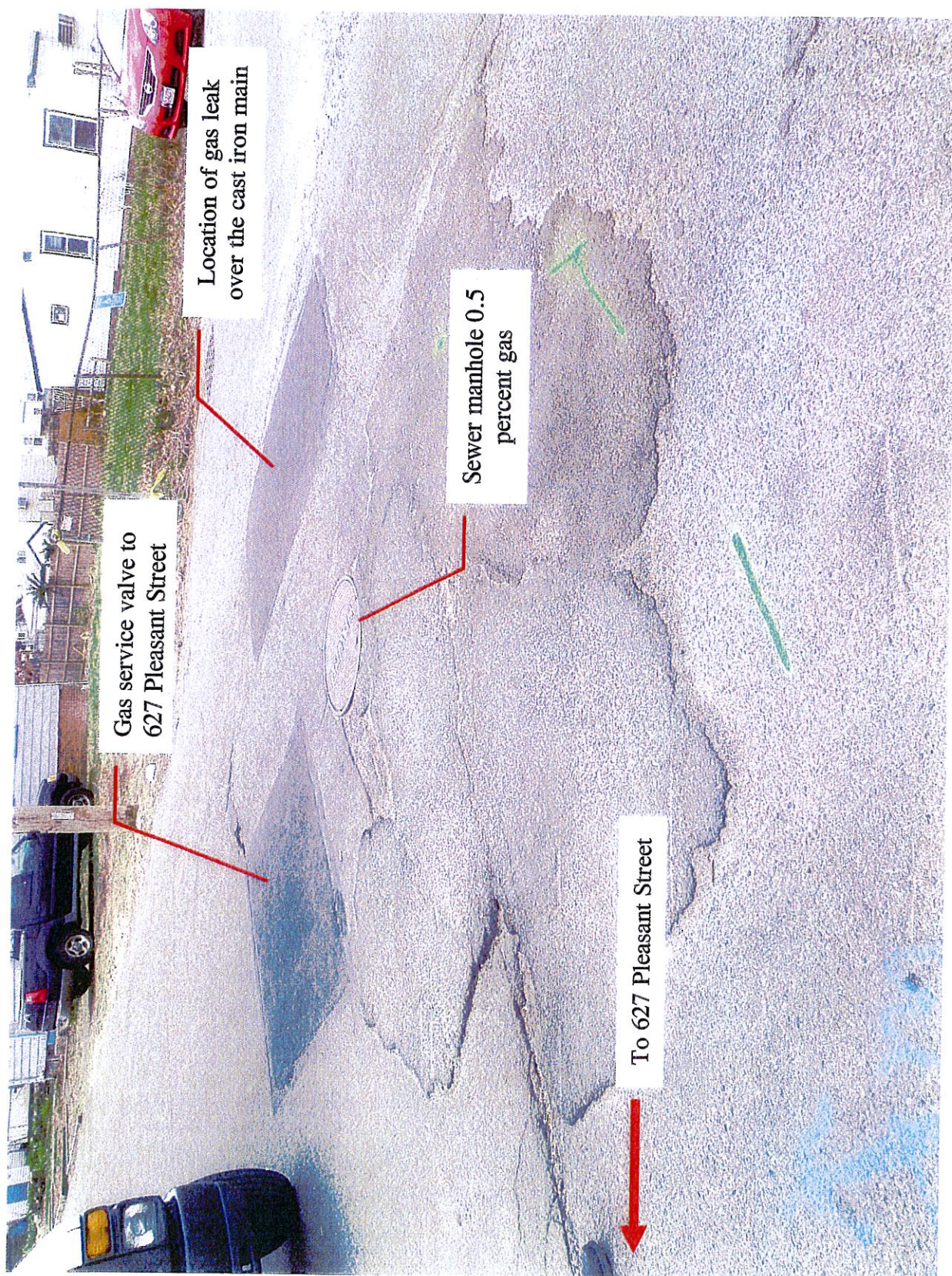
Mike Powers  
23253





7(c) - Gas reading at curb





7(d) – Street typography





7(e) – Sewer Manhole

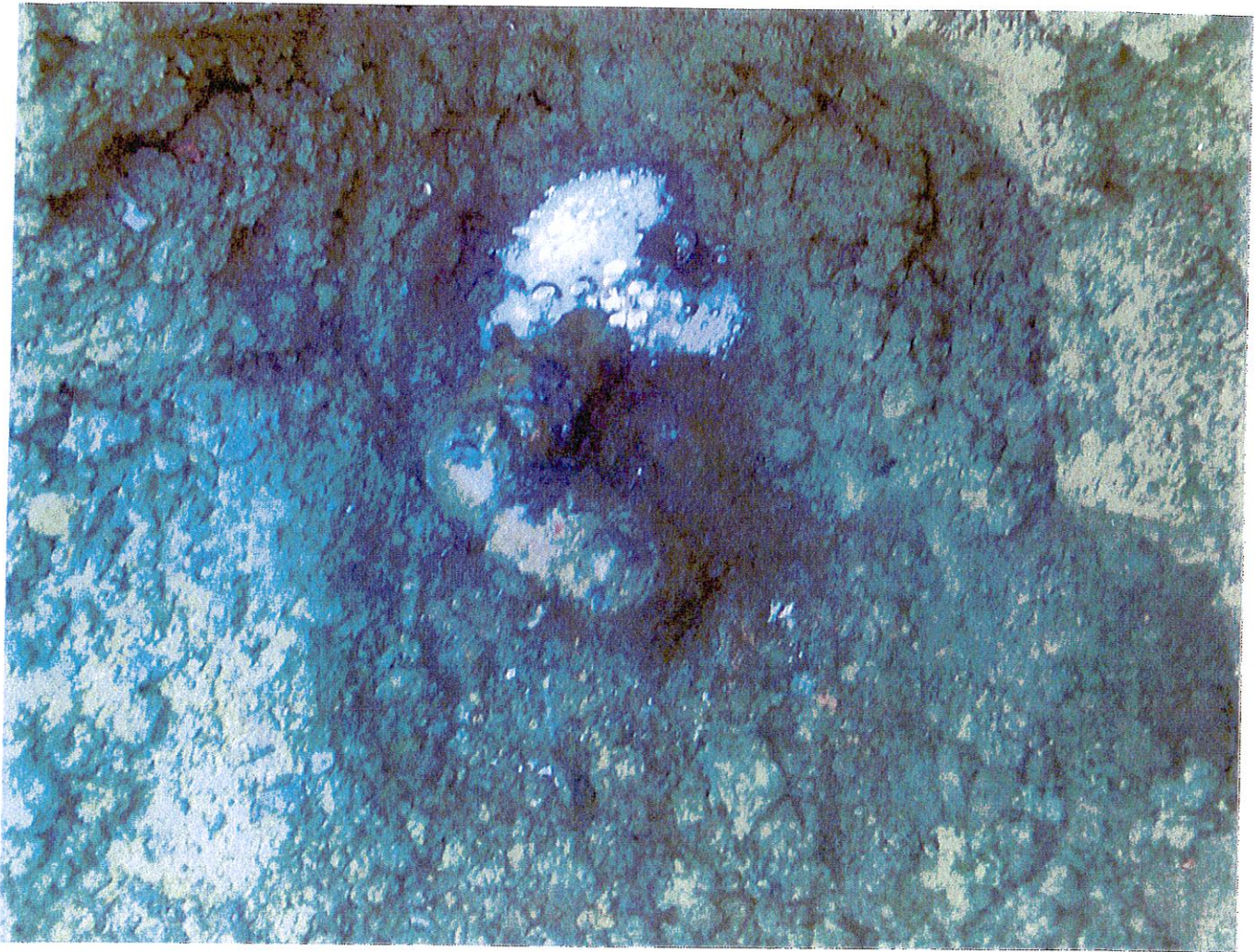


## EXHIBIT 8

### PHOTOGRAPHS:

- 8(a) – Leak at saddle transition fitting attached to the six inch cast iron gas main
- 8(b) – Service saddle transition fitting and plastic pipe that was attached to the six inch cast iron gas main
- 8(c) – Leak at transition fitting inside the basement at the foundation wall
- 8(d) – Leak at transition fitting inside the basement at the foundation wall
- 8(e) – Leak at transition fitting inside the basement at the foundation wall
- 8(f) – Transition fitting attached to the six inch cast iron main saddle
- 8(g) – Leak at transition fitting attached to the six inch cast iron main saddle
- 8(h) – Leak at transition fitting attached to the six inch cast iron main saddle
- 8(i) – Leak at transition fitting attached to the six inch cast iron main saddle





8(a) – Leak at saddle transition fitting attached to the six inch cast iron gas main





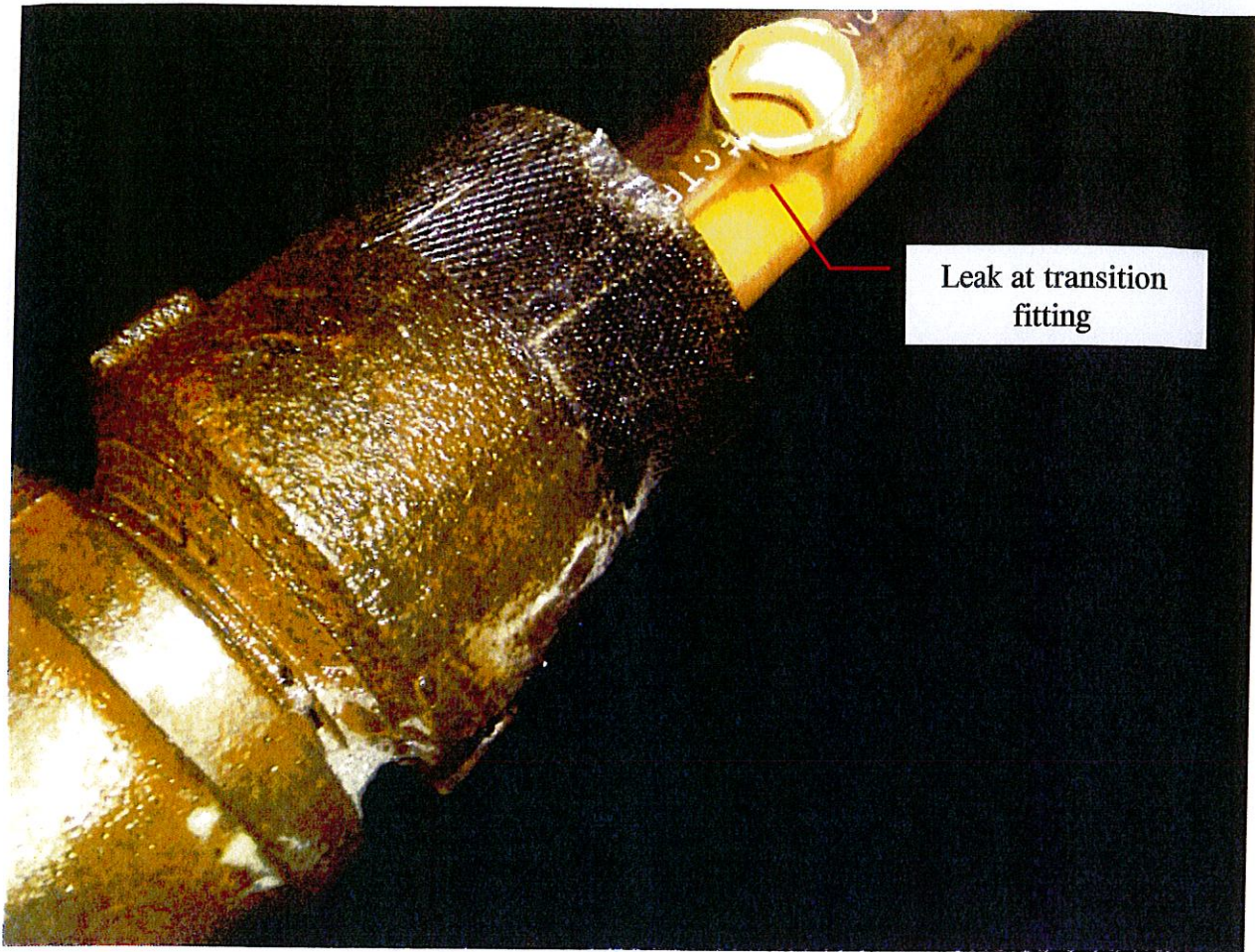
Figure 10: The saddle fitting assembly, top view.



Figure 11: The saddle fitting assembly, bottom view. Note plastic service pipe is askew.

8(b) – Service saddle transition fitting and plastic pipe that was attached to the six inch cast iron gas main





Leak at transition  
fitting

8(c) – Leak at transition fitting inside the basement at the foundation wall



Figure 5: Service line blowhole adjacent to the foundation fitting, white arrow. The service line was bowed on this end, red arrow.

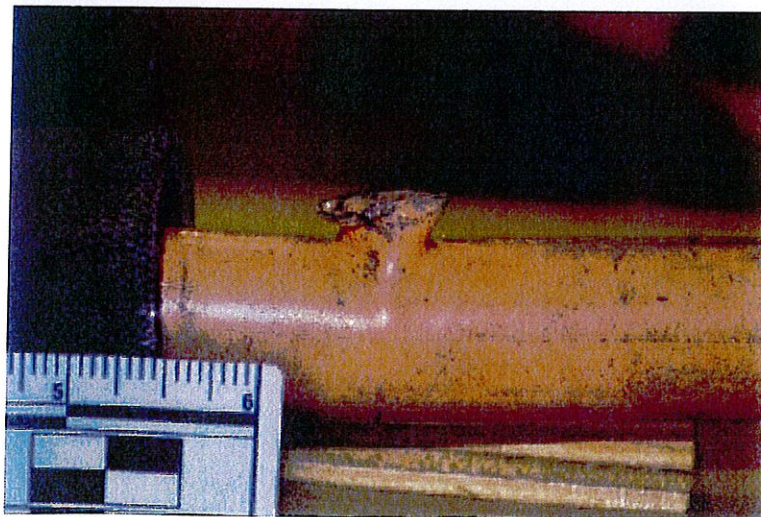


Figure 6: Detail of blowhole. This damage was heat related.

8(d) – Leak at transition fitting inside the basement at the foundation wall



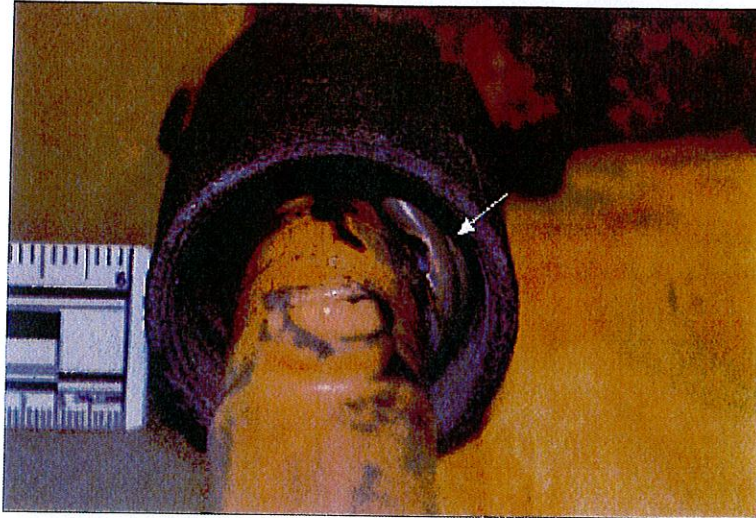


Figure 7: Melted plastic was visible within the foundation fitting, arrow. This was heat related.



Figure 8: The underside of the foundation fitting assembly and service pipe were unremarkable.

8(e) – Leak at transition fitting inside the basement at the foundation wall

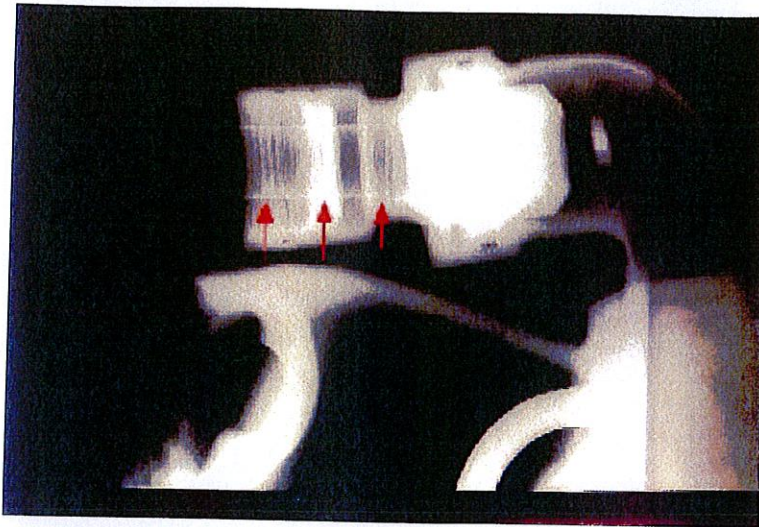


Figure 21: The stiffener in the saddle fitting was obviously askew, arrows.

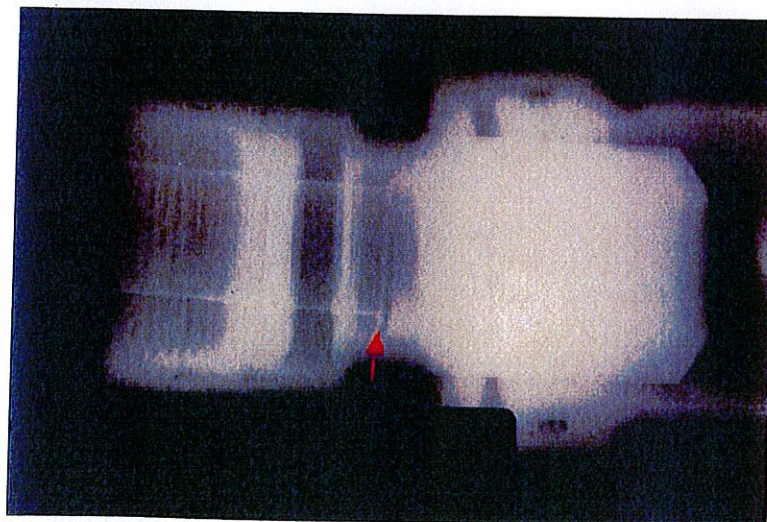


Figure 22: Saddle fitting stiffener detail, arrow.

8(f) -Transition fitting attached to the six inch cast iron main saddle



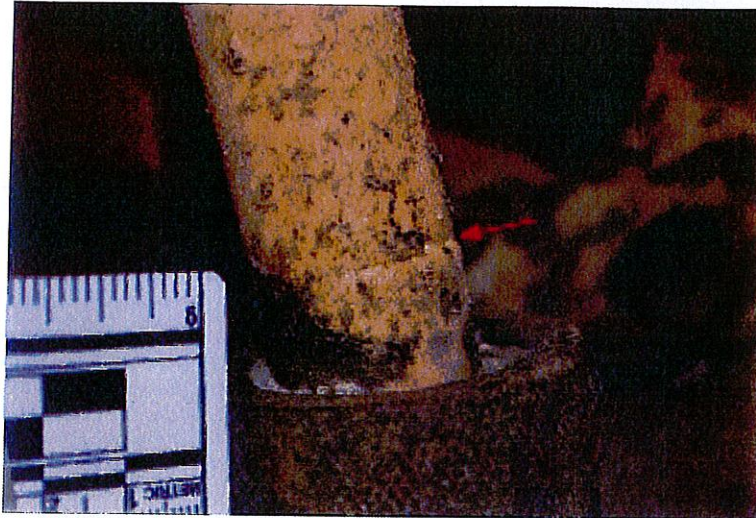


Figure 24: Detail of saddle fitting service pipe after cleaning. Note scrubbed surface texture and dimpled region, arrow.

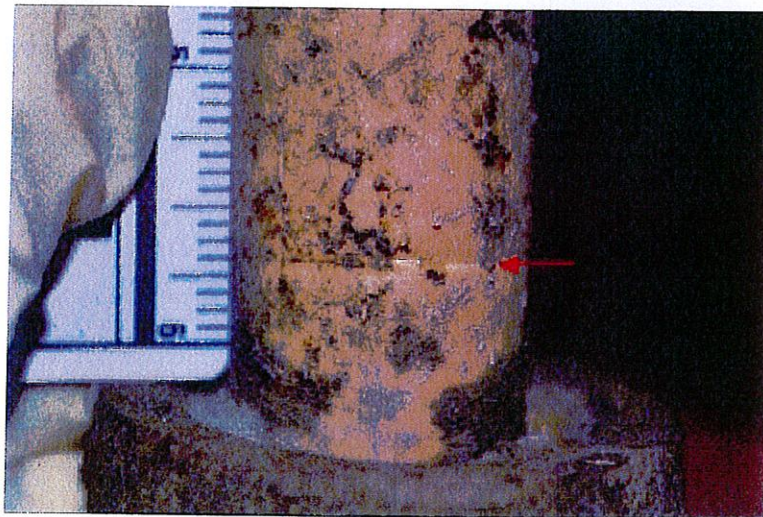


Figure 25: Facing view of saddle pipe dimple, arrow.

8(g) – Leak at transition fitting attached to the six inch cast iron main saddle



Figure 26: The leak testing apparatus.



Figure 27: The dimpled region was the source of the leak, not the transition fitting, arrow.

8(h) – Leak at transition fitting attached to the six inch cast iron main saddle



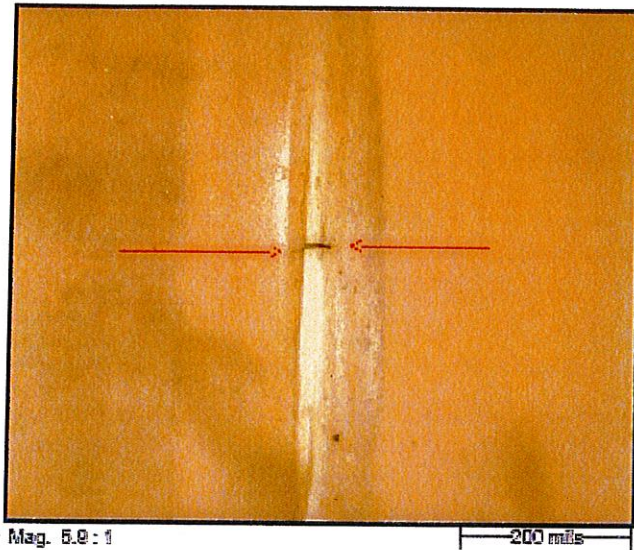


Figure 40: Saddle fitting ID with leak at arrows.

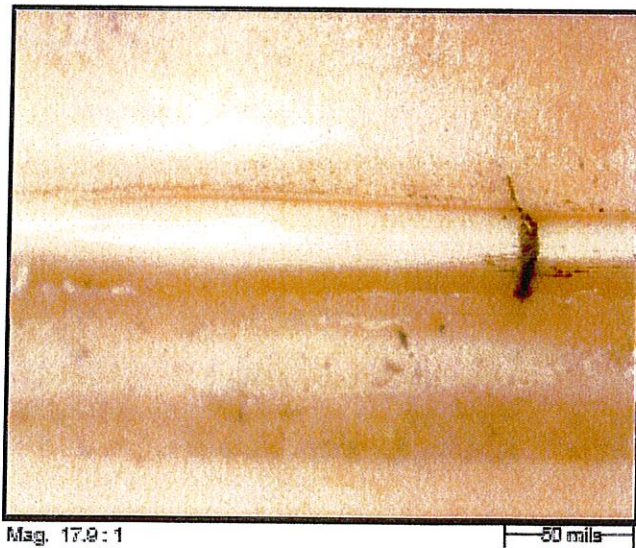


Figure 41: Detail of Figure 40 showing the crack and plastic stretching.

8(i) - Leak at transition fitting attached to the six inch cast iron main saddle

## **EXHIBIT 9**

**National Grid Leak Investigation of Customer Piping**



Supplemental Information Request PL 2-1

Respondent: Anthony LaRusso

Request: Refer to National Grid response to IR PL 1-1. Provide:

- (a) the location of the faulty pipe on the customer owned piping referenced in the IR PL 1-1 response;
- (b) provide the name and title of the person who made the determination that a portable electric heater caused the fire;
- (c) provide complete and detailed documentation to support your response.

Response: Joe Connolly from the from Splaine Investigations made the determination that a portable electric heater in the daughter's bedroom on the first floor caused the fire and most probable source of gas was from a faulty pipe on the home owners side of the gas meters. Please see attached photographs (Exhibit PL 2-1) taken of the valve on the customer's piping that did not hold pressure as well as the remains of a heater and extension cords found in the first floor bedroom. We have been informed that the occupant's daughter saw fire on bed and heard what was called an explosion after seeing fire.

Supplemental Information Request PL 3-2

Respondent: Richard J. Splaine

Request: Refer to National Grid responses to IR PL 1-1 and 2-1. Provide:

- (a) complete and detailed documentation on the background and training of Mr. Connolly sufficient to demonstrate that Mr. Connolly is an expert in the area of determining the response to IR PL 2-1;
- (b) a statement from the witness that informed National Grid that the occupant's daughter saw fire on the bed, and heard what was called an explosion after seeing fire;
- (c) complete and detailed documentation on the pressure test of the piping "that did not hold pressure" referred to in response to IR PL 2-1, including but not limited to; test pressure, test duration, pressure drop documentation;
- (d) test equipment utilized to perform the pressure test of the piping, make, model as referred to in response to IR PL 2-1;
- (e) the operator qualification (or licensing) records of the person(s) that performed the pressure test;
- (f) provide the name and title of the authority that witnessed the pressure test of the piping referred to in response to IR PL 2-1 and;
- (g) complete and detailed documentation to support National Grid's conclusion that "a faulty pipe (or fitting) on the home owners side of the gas meters" was the most probable source of the gas escape.

Response: (a-g) Please see Exhibit PL-3-2 and Exhibit PL-3-1. National Grid investigators' were told by fire investigators from the Town of Winthrop that the daughter saw the bed on fire. The pressure test referred to in IR PL 2-1 was conducted by the investigators from the homeowner's insurance company. National Grid does not have their qualifications.



# Splaine Investigations Inc.

14 North Hill Drive  
North Falmouth, Massachusetts 02556-2107

Office 508-563-5845  
FAX 508-563-3875  
E-mail SplaineInv@verizon.net

May 28, 2013

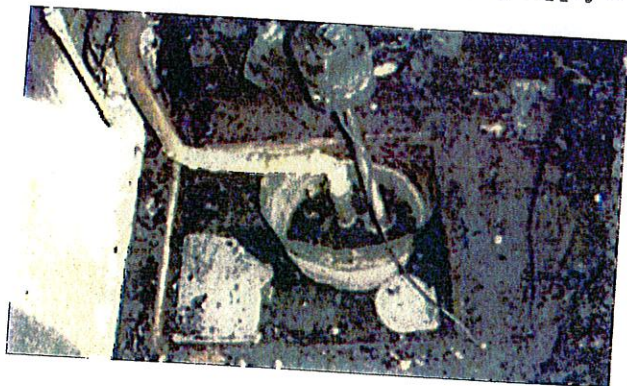
Christopher S. Aronson, Esquire  
Senior Counsel  
National Grid  
40 Sylvan Road  
Waltham, MA 02451

Re: Fire Incident – 627 Pleasant Street, Winthrop, Ma  
Home Owner: Sherian V Waldron  
Date of Loss: February 23, 2012  
National Grid

Mr. Aronson:

As directed, in response to a request from Department of Public Utilities please review the following indicators to support our opinion that the National Grid utility feed was not a source of any gas leak regarding the referenced fire incident.

The fire scene examination and follow-up investigations revealed no avenue for gas vapors to enter the dwelling. No utility supply leaks or orifices were discovered.



The examination centered around the sump pump area to determine if a leak in the drain pipe occurred and allowed the migration of gas vapors into the dwelling. The area around the sump pipe was excavated and tested with no conclusions. Further examination was requested by the home owners insurance investigators to scope the drain pipe.

On April 9, 2012, the examination continued with the DPU and insurance investigators. Additional excavation was performed and a scope of the pipe was performed with negative results. A minor leak was documented outside the dwelling foundation. The scope procedure was videotaped and we have a copy on file if needed.



It is our continued opinion that the cause of the fire was from an internal source within the dwelling and not from the migration of gas vapors from outside the building. As previously reported, a gas valve located in the basement on the dwelling's side of the gas meter was found to leak as indicated by the bubbles from test soaping and was the most

probable cause for the gas vapor fire in the basement and other areas of the dwelling.



Our fire scene investigation was conducted using the "scientific Method" of fire investigation. The accepted indicators included witness statements, burn patterns, height of burn, direction of burn, electrical arc mapping and propagation of fire. The indicators document the area as being in the basement of the dwelling.

The burn patterns indicate the fire was in the basement and propagated to other areas of the dwelling. Examination of the gas utility revealed not indicator or burn patterns to support the a fire from outside the dwelling or the migration of gas from an external source.

Thank you for the opportunity to provide our service to you. If you need additional information or have any questions please contact us.

SPLAINE INVESTIGATIONS INC

Richard J. Splaine, ME, CFI  
Joseph Connolly, CFI

Enclosure



## **EXHIBIT 10**

### **Operator Qualification Records**

National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
December 14, 2012.

Information Request PL 1-9

**Respondent:** Brian Cotting

**Request:** Provide the operator qualification record for the person(s) who performed the last leakage survey of the main and services before February 23, 2012.

**Response:** Please see attached as Exhibit PL 1-9 the operator qualification record for the James Riley from Omark Consultants who performed the last leakage survey of the main and services before February 23, 2012.



## Exhibit PL 1-9

Company: OMark Consultants (NGA)  
Operator: (NGA) Northeast Gas Association  
User Task Status Report

Riley, James

Run by: User Nationalgrid  
Run on: 08/01/2011

TASK NAME	STATUS
06A - CT06A-Inspecting for atmospheric Corrosion: Distribution Technician	Qualified
06B - CT06B-Inspecting for atmospheric Corrosion: Customer Service Technician	Qualified
08A - CT08A-Visually inspecting for internal corrosion: Distribution Technician	Qualified
08B - CT08B-Visually inspecting for internal corrosion: Customer Service Technician	Qualified
11A - CT11A-Appling pipe coating in the field	Qualified
12A - CT12A-Cleaning and either coating or jacketing pipe for atmospheric corrosion: Distribution	Qualified
17A - CT17A-Repair coating on a steel pipelines: Distribution	Qualified
18 - CT18-Conducting gas leakage surveys	Qualified
19 - CT19-Patrolling and inspecting pipelines	Qualified
20A - CT20A-Investigating Leak/Odor Complaints(Outside)	Qualified
23 - CT23-Inspecting the condition of exposed	Qualified
24 - CT24-Inspect pipe for damage	Qualified
70 - CT70-Properties of Natural Gas and Abnormal Operating Conditions	Qualified



National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
National Grid  
April 4, 2013

Information Request PL 2-4

**Respondent:** Brian Cotting

**Request:** Refer to National Grid response to IR PL 1-9. Provide:

- (a) the Operator Qualification records for James Riley, include in your response previous, current and upcoming qualification dates.

**Response:** Please find attached as Exhibit PL 2-4 the Operator Qualification records for James Riley. The upcoming qualification dates are listed under the heading of the Next Date. James Riley will be re-qualified for each task as required prior to the expiration of his current qualification.

# Exhibit PL 2-4



## HISTORY OF EMPLOYEE QUALIFICATIONS

11/18/11 O'Mark Consultants, Inc.

Employee ID: 175

First Name: James

Last: Riley

Title:

Phone:

Company: O'Mark Consultants, Inc.

State:

### QUALIFICATIONS

Task ID	Name	Rev	Seq	Qualified	Next Date	Revoked
NGA-008A	Inspecting for atmospheric corrosion	1	0	07/21/11	07/20/16	
NGA-008B	Inspecting for atmospheric corrosion	1	0	07/21/11	07/20/16	
NGA-008A	Visually inspecting for internal corrosion	1	0	07/21/11	07/20/16	
NGA-008B	Visually inspecting for internal corrosion	1	0	07/21/11	07/20/16	
NGA-018	Conducting gas leakage surveys	1	0	07/21/11	07/20/16	
NGA-019	Patrolling and inspecting pipeline	1	0	07/21/11	07/20/16	
NGA-020A	Investigating leak/odor complaints	1	0	07/21/11	07/20/16	
NGA-070	Properties of natural gas and abnormal operating	1	0	07/21/11	07/20/14	
NGA-072	Installation of Customer Meters and Regulators	1	0	07/21/11	07/20/16	

Information Request PL 2-5

**Respondent:** Tatiana Roc

**Request:** Refer to National Grid response to IR PL 1-11. Provide the Operator Qualification records for:

- (a) Michael Ardita and Julie Bentivegna;
- (b) include previous, current and upcoming qualification dates.

**Response:** Attached as Exhibit PL 2-5 please find Operator Qualification records for Michael Ardita and Julie Bentivegna. The upcoming qualification date is listed under the heading of Retraining Date. These two employees will be re-qualified for each task needed to perform their jobs prior to the expiration of their current qualification.



# Exhibit PL 2-5













First Name	Last Name	Item Type	Item ID	Description	Completion Date	Rescheduling Date	Completion Status
Michael	Arifia	QUALIFICATION	TLD_OQTASK60	QC09 Joining plastic pipe for maintenance	01/20/2012	01/19/2015	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK60	QC09 Joining plastic pipe for maintenance	01/25/2013	01/25/2016	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK61	QC01 Install bolt-on tee on plastic pipe	02/24/2009	02/24/2012	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK61	QC01 Install bolt-on tee on plastic pipe	02/06/2013	02/06/2016	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK61	QC01 Install bolt-on tee on plastic pipe	01/27/2011	01/27/2014	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK61	QC01 Install bolt-on tee on plastic pipe	01/20/2012	01/20/2015	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK62	QC02 Inspect plastic pipe fusion joint - maintenance	01/25/2013	01/25/2016	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK62	QC02 Inspect plastic pipe fusion joint - maintenance	02/24/2009	02/24/2012	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK62	QC02 Inspect plastic pipe fusion joint - maintenance	02/06/2013	02/06/2016	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK62	QC02 Inspect plastic pipe fusion joint - maintenance	01/27/2011	01/27/2014	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK62	QC02 Inspect plastic pipe fusion joint - maintenance	01/20/2012	01/20/2015	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK70	QC070 Abnormal Operating Conditions (Properties of Natural Gas	01/25/2013	01/25/2016	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK70	QC070 Abnormal Operating Conditions (Properties of Natural Gas	05/24/2007	05/24/2010	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK70	QC070 Abnormal Operating Conditions (Properties of Natural Gas	05/02/2007	05/02/2010	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK71	QC071 Operator Excavation in Vicinity of Pipeline	01/25/2013	01/25/2016	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK71	QC071 Operator Excavation in Vicinity of Pipeline	02/09/2010	02/09/2013	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_OQTASK72	QC072 Installation of Customer Means and Regulations	05/17/2008	05/17/2011	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_PUQTASK01	PJQ01 Electro Fusion	01/27/2011	01/27/2014	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_PUQTASK01	PJQ01 Electro Fusion	01/20/2012	01/20/2015	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_PUQTASK02	PJQ02 Various Mechanical Filings	01/27/2011	01/27/2014	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_PUQTASK02	PJQ02 Various Mechanical Filings	01/25/2013	01/25/2016	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_PUQTASK03	PJQ03 Manual Butt Fusion	01/27/2011	01/27/2014	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_PUQTASK03	PJQ03 Manual Butt Fusion	01/25/2013	01/25/2016	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_PUQTASK03	PJQ03 Manual Butt Fusion	01/27/2011	01/27/2014	QC 1-3-4)(Complete Pass Write, Sim, Perf
Michael	Arifia	QUALIFICATION	TLD_PUQTASK03	PJQ03 Manual Butt Fusion	01/20/2012	01/20/2015	QC 1-3-4)(Complete Pass Write, Sim, Perf

National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
May 6, 2013

Information Request PL 3-6

**Respondent:** Tatiana Roc

**Request:** Refer to the Company response to IR PL 2-5.

- (a) Provide operator qualification records after 2005 for Mr. Ardita in Task 18;
- (b) Provide a list of all covered tasks Mr. Ardita must be qualified, to perform his job functions.

**Response:**

- (a) Provide operator qualification records after 2005 for Mr. Ardita in Task 18;

Mr. Ardita has no operator qualification records for Task 18 after 2005

- (b) Provide a list of all covered tasks Mr. Ardita must be qualified, to perform his job functions:

Below is the list of covered tasks for Mr. Ardita to perform his job functions:

- Task 6 - Inspecting for atmospheric corrosion
- Task 8 - Visually inspecting for internal corrosion
- Task 11 - Applying pipe coating in the field
- Task 12 - Cleaning and either coating or jacketing pipe for atmospheric corrosion
- Task 14 - Installing/replacing an anode on a pipeline
- Task 15 - Installing/replacing and testing electrical isolation couplings on a pipeline
- Task 16 - Install/replace a corrosion test station on a pipeline
- Task 17 - Repair coating on a steel pipelines
- Task 20 - Investigating leak/odor complaints
- Task 21 - Line locating and mark out
- Task 22 - Inspection of 3rd party excavations for damage prevention/cast iron encroachment
- Task 23 - Inspecting the condition of exposed metallic pipe or pipe coating
- Task 24 - Inspect pipe for damage
- Task 29 - Repair distribution line leaks



**National Grid**  
**National Grid's Responses to the Department's First Set of Information Requests**  
**627 Pleasant Street, Winthrop Incident Investigation**  
**May 6, 2013**

- Task 30 - Repair a non-leaking pipe
  - Task 31 - Installation of pipe
  - Task 32 - Purging a pipeline into service
  - Task 33 - Purging a pipeline out of service
  - Task 34 - Performing pressure test on a pipeline
  - Task 35 - Stopping gas flow
  - Task 36 - Abandonment or deactivation of facilities
  - Task 37 - Tapping pipelines under pressure
  - Task 39 - Remove service tee or fitting from steel or cast iron mains
  - Task 40 - Install/Replace tracer wire
  - Task 41 - Inspect and operate valves
  - Task 42 - Repair and maintain distribution line valves
  - Task 43 - Lubricate distribution line valves
  - Task 45 - Restore service
  - Task 47 - Abandon a gas service line
  - Task 49 - Mechanical joining of pipe other than plastic
  - Task 50 - Joining plastic pipe
  - Task 51 - Install tapping tee on plastic pipe
  - Task 52 - Inspect plastic pipe fusion joint
  - Task 70 - Properties of natural gas and abnormal operating conditions
  - Task 71 - Operator Excavation and Backfilling in the Vicinity of a Pipeline
  - Task 72 - Installation of Customer Meters and Regulators
- 
- PJQ01 - Electro Fusion
  - PJQ02 - Various Mechanical Fittings
  - PJQ03 - Manual Butt Fusion

## **EXHIBIT 11**

### **Odorant Level Readings**



National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
December 14, 2012

Information Request PL 1-21

**Respondent:** John Barrett

**Request:** Provide the Odorant level readings taken on Pleasant Street, prior to and after the Incident. Provide operator qualification records for the person( s) who performed the odorant test the day of the incident.

**Response:** Attached as Exhibit PL 1-21 are records of distinct odor level tests taken before the incident on February 16, 2012 at the Winthrop Fire Department, and directly after the incident on February 23, 2012 at 10:00 and 10:40 am. All distinct odorant levels measured were within legal limits. Please note that the original memorandum from John Barrett was edited on November 16, 2012 to correct a typographical error regarding the calibration date. In addition, please see attached operator qualification records for James Muldowney, Jaques Moron and John Doherty.

**Inter-office Memo  
Instrumentation & Regulation NE**

**To:** File  
**From:** John Barrett  
**Date:** February 23, 2012  
**Subject:** 627 Pleasant St., Winthrop, MA.

On February 23, 2012 at approximately 8:45 p.m. John Doherty, Instrumentation and Regulation Supervisor, was notified of a possible gas related incident at 627 Pleasant St., Winthrop. John Doherty, Jacques Moron (I&R Technician) and James Muldowney (I&R Technician) went to the site. Distinct Odor Level tests were conducted at the Pleasant @Pauline Regulator Station, Winthrop and # 623 Pleasant St., Winthrop. These locations are in close proximity to the incident.

The results of these tests are listed below:

Date	Time	Location	Threshold Odor Level (% Gas in Air)	Distinct Odor Level (% Gas in Air)	Test Equip. ID	Test Equip. Calibration Date	Test By
2/23/2012	10:00 am	Pleasant @ Pauline Regulator Station	0.04	0.11	#1991-3	May/2012	J.M.
			0.05	0.11	#1991-3	May/2012	J.M.
			0.06	0.12	#1991-3	May/2012	J.D.
2/23/2012	10:40 am	623 Pleasant St. @ water heater	0.03	0.10	#1991-3	May/2012	J.M.
			0.04	0.12	#1991-3	May/2012	J.M.
			0.04	0.11	#1991-3	May/2012	J.D.

**cc:** Mark Eagan  
Tatiana Roc  
Christopher Aronson  
Ernest Grasso



**Inter-office Memo  
Instrumentation & Regulation NE**

To: File  
From: John Barrett  
Date: November 16, 2012  
Subject: 627 Pleasant St., Winthrop, MA.

On February 23, 2012 at approximately 8:45 p.m. John Doherty, Instrumentation and Regulation Supervisor, was notified of a possible gas related incident at 627 Pleasant St., Winthrop. John Doherty, Jacques Moron (I&R Technician) and James Muldowney (I&R Technician) went to the site. Distinct Odor Level tests were conducted at the Pleasant @Pauline Regulator Station, Winthrop and # 623 Pleasant St., Winthrop. These locations are in close proximity to the incident.

The results of these tests are listed below:

Date	Time	Location	Threshold Odor Level (% Gas in Air)	Distinct Odor Level (% Gas in Air)	Test Equip. ID	Test Equip. Calibration Date	Test By
2/23/2012	10: 00 am	Pleasant @ Pauline Regulator Station	0.04	0.11	#1991-3	May/2011	J.M.
			0.05	0.11	#1991-3	May/2011	J.M.
			0.06	0.12	#1991-3	May/2011	J.D.
2/23/2012	10:40 am	623 Pleasant St. @ water heater	0.03	0.10	#1991-3	May/2011	J.M.
			0.04	0.12	#1991-3	May/2011	J.M.
			0.04	0.11	#1991-3	May/2011	J.D.

cc: Mark Egan  
Tatiana Roc  
Christopher Aronson  
Ernest Grasso

## **EXHIBIT 12**

**Inside Leakage Survey and Atmospheric Corrosion Records  
Main and Outside Services Leakage Surveys**



National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
December 14, 2012

Information Request PL 1-8

**Respondent:** Brian Cotting

**Request:** Provide the dates of the inside leakage surveys and atmospheric corrosion inspections performed since 2002 and the results of those inspections.

**Response:** The last inside leak survey and atmospheric corrosion inspection was performed on March 17, 2011. There was no leak and visual inspection of piping found no corrosion. National Grid will supplement this response with regard to earlier inspections.

National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
January 4, 2013

Information Request PL 1-8

**Respondent:** Brian Cotting

**Request:** Provide the dates of the inside leakage surveys and atmospheric corrosion inspections performed since 2002 and the results of those inspections.

**Response:** No further records were found of earlier inspections.



National Grid  
National Grid's Responses to the Department's First Set of Information Requests  
627 Pleasant Street, Winthrop Incident Investigation  
December 21, 2012

Information Request PL 1-7

**Respondent:** Brian Cotting

**Request:** Provide the dates of the main and service leakage surveys performed since 2002, and the results on those surveys.

**Response:** Please see dates and results of leak surveys below.

**Information Request PL 1-7**

Main and service leakage surveys performed since 2002/results  
627 Pleasant Street  
Winthrop, MA

**Walking Survey**

Date/Date Range	Surveyor	Company	Results
08/01/2011	James Riley	Omark Consultants	No leaks located
07/14/2008 - 08/01/2008	Matt Coutu	Omark Consultants	No leaks located
09/06/2005 - 10/20/2005	James McGuire	Union	No leaks located
05/06/2002 - 06/06/2002	B Grabau	Heath Consultants	No leaks located

**Mobile Survey**

Date/Date Range	Surveyor	Company	Results
09/15/2010	Jamie Johnston	Omark Consultants	No leaks located
04/21/2009	Dave Clough	Union	No leaks located
01/11/2007 - 01/18/2007	J Alvarado	Union	No leaks located
10/26/2006 - 10/27/2006	John Baes	Surveys & Analysis	No leaks located

**National Grid**  
**National Grid's Responses to the Department's First Set of Information Requests**  
**627 Pleasant Street, Winthrop Incident Investigation**  
**December 21, 2012**

<b>09/15/2004 - 09/17/2004</b>	<b>Hank Perkins</b>	<b>Heath Consultants</b>	<b>No leaks located</b>
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<b>03/24/2003 - 03/26/2003</b>	<b>Julie Bentivegna</b>	<b>Union</b>	<b>No leaks located</b>
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**Winter Patrol**

<b>Date/Date Range</b>	<b>Surveyor</b>	<b>Company</b>	<b>Results</b>
<b>02/01/2011</b>	<b>Mike Harris</b>	<b>Omark Consultants</b>	<b>No leaks located</b>
<b>Winter 2010</b>	<b>No Winter Patrol</b>		<b>NA</b>
<b>Winter 2009</b>	<b>Dave Connelly</b>	<b>Union</b>	<b>No leaks located</b>
<b>Winter 2008</b>	<b>No Winter Patrol</b>		<b>NA</b>
<b>Winter 2007</b>	<b>J Alvarado</b>	<b>Union</b>	<b>No leaks located</b>
<b>Winter 2006</b>	<b>Roger Breau</b>	<b>Union</b>	<b>No leaks located</b>
<b>Winter 2005</b>	<b>Hank Perkins</b>	<b>Heath Consultants</b>	<b>No leaks located</b>
<b>Winter 2004</b>	<b>John Czarnota</b>	<b>Union</b>	<b>No leaks located</b>
<b>Winter 2003</b>	<b>Julie Bentivegna</b>	<b>Union</b>	<b>No leaks located</b>
<b>Winter 2002</b>	<b>B Grabau</b>	<b>Heath Consultants</b>	<b>No leaks located</b>